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The Neglected American Plants.

IT is an old and familiar saying that a prophet is not without honor, except in his own country, and as we were making our way this spring through a dense forest in the state of New-Jersey, we were tempted to apply this saying to things as well as people. How many grand and stately trees there are in our woodlands, that are never heeded by the arboriculturist in planting his lawns and pleasure-grounds; how many rich and beautiful shrubs, that might embellish our walks and add variety to our shrubberies, that are left to wave on the mountain crag, or overhang the steep side of some forest valley; how many rare and curious flowers that bloom unseen amid the depths of silent woods, or along the margin of wild water-courses. Yes, our hot-houses are full of the heaths of New-Holland and the Cape, our parterres are gay with the Verbenas and Fuchsias of South America, our pleasure-grounds are studded with the trees of Europe and Northern Asia, while the rarest spectacle in an American country place, is to see above three or four native trees, rarer still to find any but foreign shrubs, and rarest of all, to find any of our native wild flowers.

Nothing strikes foreign horticulturists and amateurs so much, as this apathy and indifference of Americans, to the beautiful sylvan and floral products of their own country. An enthusiastic collector in Belgium first made us keenly sensible of this condition of our countrymen, but Summer, in describing the difficulty he had in procuring from any of his correspondents, here, American seeds or plants—even of well known and tolerably abundant species, by telling us that amateurs and nurserymen who annually import from him every new and rare exotic that the richest collections of Europe possessed, could scarcely be prevailed upon to make a search for native American plants, far more beautiful, which grow in the woods not ten miles from their own doors. Some of them were wholly ignorant of such plants, except so far as a familiarity with their names in the books may be called an acquaintance. Others knew

them, but considered them "wild plants," and therefore, too little deserving of attention to be worth the trouble of collecting, even for curious foreigners. "And so," he continued, in a country of Azaleas, Kalmias, Rhododendrons, Cypripediums, Magnolias and Nyssas,—the loveliest flowers, shrubs, and trees of temperate climates,—you never put them in your gardens, but send over the water every year for thousands of dollars worth of English larches and Dutch hyacinths. *Voila le gout Republique!*"

In truth, we felt that we quite deserved the sweeping sarcasm of our Belgian friend. We had always, indeed, excused ourselves for the well known neglect of the riches of our native Flora, by saying that what we can see any day in the woods, is not the thing by which to make a garden distinguished—and that since all mankind have a passion for novelty, where, as in a fine foreign tree or shrub, both beauty and novelty are combined, so much the greater is the pleasure experienced. But, indeed, one has only to go to England, where "American plants" are the fashion, (not undeservedly, too,) to learn that he knows very little about the beauty of American plants. The difference between a grand Oak or Magnolia, or Tulip tree, grown with all its graceful and majestic development of head, in a park where it has nothing to interfere with its expansion but sky and air, and the same tree shut up in a forest, a quarter of a mile high, with only a tall gigantic mast of a stem, and a tuft of foliage at the top, is the difference between the best bred and highly cultivated man of the day, and the best buffalo hunter of the Rocky Mountains, with his sinewy body tattooed and tanned till you scarcely know what is the natural color of the skin. A person accustomed to the wild Indian only, might think he knew perfectly well what a man is—and so indeed, he does, if you mean a red man. But the "civilizee" is not more different from the aboriginal man of the forest, than the cultivated and perfect garden tree or shrub, (granting always that it *takes* to civilization—which some trees, like Indians, do not,) than a tree of the pleasure grounds differs from a tree of the woods.

Perhaps the finest revelation of this sort in England, is the clumps and masses of our Mountain Laurel, *Kalmia latifolia*, and our Azaleas and Rhododendrons, which embellish the English pleasure-grounds. In some of the great country seats, whole acres of lawn, kept like velvet, are made the ground-work upon which these masses of the richest foliaged and the gayest flowering shrubs are embroidered. Each mass is planted in a round or oval bed of deep, rich, sandy mould, in which it attains a luxuriance and perfection of form and foliage, almost as new to an American as to a Sandwich Islander. The Germans make avenues of our Tulip trees, and in the South of France, one finds more planted Magnolias in the gardens, than there are, out of the woods, in all the United States. It is thus, by seeing them away from home, where their merits are better appreciated, and more highly developed, that one learns for the first time what our gardens have lost, by our having none of these "American plants" in them.

The subject is one which should be pursued to much greater length than we are able to follow it in the present article. Our woods and swamps are full of the most exquisite plants, some of which would greatly embellish even the smallest garden. But it is rather to one single feature in the pleasure grounds, that we would at this moment direct the attention, and that is, the introduction of two broad-leaved evergreen shrubs,

that are abundant in every part of the middle states, and that are, nevertheless, seldom to be seen in any of our gardens or nurseries, from one end of the country to the other. The defect is the more to be deplored, because our ornamental plantations, so far as they are evergreen, consist almost entirely of pines and firs—all narrow-leaved evergreens—far inferior in richness of foliage, to those we have mentioned.

The *Native Holly* grows from Long-Island to Florida, and is quite abundant in the woods of New-Jersey, Maryland and Virginia. It forms a shrub or small tree, varying from four to forty feet in height—clothed with foliage and berries of the same ornamental character as the European Holly—except that the leaf is a shade lighter in its green. The plant too, is perfectly hardy, even in the climate of Boston—while the European Holly is quite too tender for open air culture in the middle states—notwithstanding that peaches ripen here in orchards, and in England only on walls.

The *American Laurel* or Kalmia, is too well known in all parts of the country to need any description. And what new shrub, we would ask, is there—whether from the Himmalayas or the Andes, whether hardy or tender, which surpasses the American Laurel when in perfection—as to the richness of its dark green foliage, or the exquisite delicacy and beauty of its gay masses of flowers? If it came from the highlands of Chili, and were recently introduced, it would bring a guinea a plant, and no grumbling!

Granting all this, let our readers who wish to decorate their grounds with something *new and beautiful*, undertake now, *in this month of May*, (for these plants are best transplanted *after* they have commenced a new growth,) to plant some laurels and hollies. If they would do this quite successfully, they must not stick them here and there among other shrubs in the common border—but prepare a bed or clump, in some cool, rather shaded aspect—a north slope is better than a southern one—where the subsoil is rather damp than dry. The soil should be sandy or gravelly, with a mixture of black earth well decomposed, or a cart-load or two of rotten leaves from an old wood, and it should be at least 18 or 20 inches deep, to retain the moisture in a long drouth. A bed of these fine evergreens, made in this way, will be a *feature* in the grounds, which, after it has been well established for a few years, will convince you far better than any words of ours, of the neglected beauty of our American plants.

OSAGE ORANGE FOR HEDGES.

BY B. HODGE, BUFFALO, N. Y.

A. J. Downing, Esq.—Dear Sir: During the past few years I have had very many inquiries relative to the Osage Orange as a hedge plant—whether it would endure the severity of hard winters, &c. For the purpose of enabling me to answer these inquiries understandingly, two years ago I procured and planted a quantity of the seed. The first season, (1849,) they made a growth of nearly two feet—and when the cold frosts of au-

tumn came, the wood was but imperfectly ripened. I left them entirely unprotected, and in the spring the whole of the tops were completely killed, quite down to the ground. The roots, however, all survived, and during the year 1850 they made a fine growth, having thrown up numerous shoots from three to four feet high. I have examined them to-day, and find that the ends of all the branches are killed from one to two feet. We have had a few very cold days during the past winter—yet, on the whole, a rather mild winter than otherwise. Again, there was considerable snow on the ground during the most severe weather, and this no doubt protected the trees. From my little experience, and from observation, I am quite of the opinion, that the Osage Orange cannot be relied on for a hedge in a northern latitude. Will others who have had more experience, give us their opinion?

In conclusion, I would just remark, that in the vicinity of Cincinnati, the Osage Orange succeeds admirably. Such beautiful hedges as I saw there last autumn, are rare indeed, in this country. I fear, however, that for New-York, New-England, Wisconsin, Northern Illinois, &c., it will not answer. Yours very truly, B. HODGE.

Buffalo, March 14, 1851.

REMARKS.—We believe we have already given our opinion that the Osage Orange will make a good hedge no farther north than the peach ripens well. But we have no doubt it will answer at Buffalo. It is found by experience, that as soon as the hedge is sheared, and the growth becomes short and well matured, it is far hardier than when the plants are young. ED.

SOME REMARKS ON VEGETABLE PHYSIOLOGY.

BY P. BARRY, ROCHESTER, N. Y.

In what way are new layers of wood added to the stems of growing exogenous trees?

This is a mooted question among vegetable physiologists, and as the subject has been brought forcibly to my mind, by an example which I have met in pruning, I thought it might not be unprofitable to draw attention to this very interesting subject.

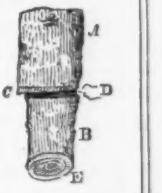
The popular theory, I believe, is that the moisture of the soil enters the roots of plants, through the spongioles or porous points, by absorption—that there it combines with soluble matters already in the roots and stem, and becomes what is called *sap*—that this ascends through the cells or organs of the stem, into the leaves, where, by parting with water by exhalation, and receiving carbonic acid gas from the atmosphere by absorption, it undergoes certain changes, becomes duly elaborated and fitted for the formation of new parts, when it takes the name of *cambium*. Then this cambium or elaborated sap, passes downwards, through the inner bark, and deposites a new layer of wood on the top of the previous one, and a new layer of bark *within* the previous one,—and thus what we call the concentric layers or annual rings of wood, by which we count the ages of trees, are formed.

This, as I have remarked, is the most popular theory, at least so I regard it, of the formation of exogenous wood. But there are some learened physiologists and botanists who dissent from this theory.

Dr. SCHLEIDEN, extraordinary professor of Botany in the University of Jena, in his "*Principles* of Scientific Botany," a learned and valuable work, says, "this is only a dream picture." "In the first place," says he, "there is no such thing as crude sap. It cannot therefore be carried to the leaves to become assimilated. From whatever part,

and at whatever time, we examine the sap of a plant, we find that it contains organic principles which cannot come from the soil, because they do not exist there; such as starch; sugar, gum, malic, citric and tartaric acids, albumen, &c. These substances are diluted with a good deal of water, and mixed with a little carbonic acid and carbonate of ammonia which are contained in the water of the soil. Even in the cells of the roots which first receive the moisture of the soil, it is chemically changed, assimilated, and the sap is most decidedly not flowing in special vessels but passing upwards from cell to cell, and thus it is in every new cell which is being developed by the formative chemical processes. *Nothing remains for the leaves to assimilate.*"

This you see is an utter denial of the ascent of the sap in special vessels, of its elaboration in the leaves, or descent in the bark. Now if he be right, how is it possible, that, when the ascent of the sap is obstructed by the compression of the stem as with a ligature the upper part, which is less in contact with the sap than the lower part, can increase much more rapidly in size? The example to which I have referred is that of the branch of a plum tree encircled by the wire of a label. This branch is four years old, and during the whole of last season and part of the one previous, this wire has been so tight that no enlargement of the wood under it could take place, the consequence is that the part just above the wire is one inch greater in circumference than that below it, so much greater have been the deposites of new matter above than below. Besides it happened that on one side the wire did not press so firmly, nor so soon as on the other, and on that side of the part below the wire, we find the last layer of wood *three times as thick* as on the other side, where the pressure was first and greatest, and the separation more complete.



The annexed drawing represents the branch referred to, A the large portion above the wire, and B the smaller portion below. C, D, the point encircled by the wire. On the side D, the wire admitted of greater expansion, and there the upper and lower lip of the wound project almost equally. On the side C, the upper lip is a regular perpendicular wall 3-16 of an inch deep, the surface of the lower part being quite even. On the cut section E, we find the last ring of wood on the side A, D, B, 3 times as large as on the other, on account of the partial communication existing at the point D.

Does not this furnish a pretty strong indication that the formation of new layers of wood, is a downward process, and that it depends upon the leaves.

Dr. SCHLEIDEN accounts for such cases by saying, "As water is continually exhaled by plants in proportion to the motion, dryness and warmth of the air, so the sap becomes concentrated, and thus interrupts the endosmotic process towards the other cells; this action is continued naturally downwards towards the roots, by which new watery and unassimilated fluids are absorbed. If this stream of crude sap* is artificially interrupted in its course from below upwards, the sap in the upper part becomes more concentrated, and its organizing power increased. This is the simple fact which lies at the foundation of all the phenomena which are brought forward to support the groundless hypothesis of a descending bark sap. The two most important facts upon this subject are: 1. The magic ring (ringing fruit trees.) 2. The action of grafts.

"If from the circumference of a branch or tree, a ring of bark be removed, the upper part will bear richer blossoms and fruit; the latter will ripen quicker, the leaves will be thrown off sooner, and the trunk will become thicker and stronger than in the part below the cutting. All this is completely explained in the foregoing facts, without making it in

* In a previous quotation the existence of a "crude sap" is denied.

the least degree necessary to assume the motion of any descending proper juice or bark sap which certainly does not exist."

"When an apricot graft grows from the trunk of a plum tree, the latter is naturally and by degrees clothed with apricot wood, for out of the same soil, an apricot tree would merely take up the same sap as the plum tree; but afterwards, in proportion as the leaves and branches of the plum tree, or of the apricot, evaporate, assimilate, &c., plum or apricot wood will remain." Such is Dr. Schleiden's mode of reasoning, and really the case of the graft presents at first sight the strongest objection to the descending sap theory, because if the new woody matter is prepared in the leaves and is deposited by a downward process, is it not reasonable to suppose that when the pear grows on a quince stock, new layers of pear wood will be deposited on the quince? But no such phenomenon occurs, and as I believe for this reason. The cambium or elaborated sap, is only a prepared condition of the food of trees, and when it happens, as in the case of the pear on the quince, that one species prepares cambium for itself and another, each one receives it as *food only* and appropriates it to its own peculiar formation in the way that two species of plants will grow in precisely the same soil without losing their identity, or two species of animals subsist on the same food without assuming any degree of similarity. I do not doubt, nor is it denied, that I am aware of, by any physiologists that the sap undergoes a certain degree of elaboration in the cells and organs of the stem, but that it is *principally* performed by the leaves, and that the principal part of the new wood is formed by the descending prepared sap, seems most in harmony with the facts that daily occur to us in practice.

P. B.

Rochester, N. Y., April, 1851.

REMARKS.—A highly interesting communication. Dr. SCHLEIDEN, in some of his works, reasons so poorly that we have little faith in him. Experiments, which may be repeated by any one, prove the passage of the fluids downward, after having risen to the leaves, and been exposed to a distinct process there. The assimilation or digestion is however not completed in the leaf, but depends for that final individuality of character which causes it to make plum or pear tree wood, upon the *bark* which immediately overlays such wood —for the downward current usually passes through the bark, and is thence distributed horizontally through the medullary rays into the interior of the stem. Hence, whatever the bark is which covers any part of the stem of a tree, such will be the kind of wood deposited beneath that bark—no matter whether the leaves above that bark be pear or quince.

This is not only proved by the familiar fact, that the barks above and below the graft, always maintain their original line of distinction, but more clearly by the experiment made by phiysiologists of grafting rings of the bark of various allied species, as the pear, quince and apple, upon different parts of the same trunk. After growing several years it was found that the pear bark had deposited pear wood—the quince bark, quince wood, and so of the others. There were no leaves to each ring of bark, and the experiment clearly proved that the action of the wood depends on the bark which overlays it, and gives its final character to the downward currant of fluid nutriment just as it undergoes its last change into solid matter. ED.

A SEASON'S RAMBLE AMONG WILD FLOWERS.

BY T. S. GOLD, CONNECTICUT.

The dissolving snows of winter remind us of the pleasures of spring, and as the frosts relax their hold upon the soil, the ever teeming earth is ready to put forth a thousand forms of life and beauty. My object at the present time, is to refresh our minds that are familiar with these beauties, not by a full description of them, but by adverting to some of their striking characters; also to awaken the attention of those who have hitherto walked the fields unmindful of a greater display of glory around them, than that with which Solomon was arrayed.

To the true lover of flowers and of nature, (and I cannot separate the two,) a wide field of enjoyment is presented, into which many never enter. I can feel no sympathy with him who ruthlessly destroys, or carelessly treads upon these gems which God has strewn so bountifully about our paths, evidently with a design to cherish our finer feelings, and soften our hearts. As they were created for our happiness and improvement, we should gather them, (but not rudely,) study the marks of design and goodness they exhibit, and present them to our friends as tokens of that peace and purity which alone pertains to the productions of the Divine hand.

The list which I propose to give of these gems of nature, will be by no means complete, but contain many found in this locality, Litchfield county, Ct. They are nearly all perennials, and most of them might be established with a little care, in some undisturbed position near the dwelling. How much would it add to the charms of a country residence to form upon that rocky knoll hard by, a collection of wild plants suited to it, or beneath the shades of some neighboring copse, or upon the borders of that little rivulet, to assemble from distant wood and glen their floral treasures, allowing each to retain their peculiar habits, of which many are very tenacious. Once established, very little care would be necessary to preserve them, and thus, through the season, a succession might be maintained of these modest, fairy-like gifts, almost in their native haunts, and another rose be added to the wreath of rural pleasures.

For every flower which I shall name, I have a strong affection; its native locality, where I have often found it, is fresh in my mind, and at the sight of it my heart thrills with delight, as when I meet an old and long tried friend.

And now, friends, let us take a long ramble in the fields and woods, beginning as soon as the blue-bird commences its happy carol, and continuing it till the chilly blasts of autumn warn us to seek again our warm firesides, there to meditate upon the many bright images with which we have stored our minds.

First, let us visit that bleak northern hill-side, for there the

Epigæa repens, (Trailing Arbutus,) as I saw before the snows were gone, had prepared its buds to open with the first genial breath of spring. Here it is, an evergreen vine, or trailing shrub, half covered with the dry leaves; but its little pink clusters are open, exhaling a fragrance equaling that of more favored flowers.

Let us pass that skirt of woodland, and under its sunny side, peeping from beneath the dry leaves, we will find the

Hepatica acutiloba and *americana*, (Liverleaf.)—These species resemble each other in their spotted lobed leaves, and in their numerous delicate blue and white flowers, and they offer us a welcome salutation to enjoy the beauties of spring.

You must follow me without particular invitation, as we visit, during the advance of the season, the various haunts of flowers, for nature's garden is extensive, and so delicate are many of her productions, that they can only thrive in the soil and aspect particularly adapted to each; yet is no spot so barren, but that at the proper time it yields its jewels. As we descend these broad rocks, wherever a niche occurs in which there is an inch of soil, we may find the

Saxifraga virginiensis, (Rock Saxifrage,) not waiting to grow more than one inch in height, lest the kindly showers of spring fail, it opens its little white flowers until the whole rock is carpeted with them. Where the soil is deeper, it grows upwards of a foot in height.

In yonder sheltered vale, half shaded and half sunny, undisturbed by the hand of man, we may find many flowers.

Anemone nemorosa and *thalictroides*, (Wood Anemone.) Fit tenants of this favored spot; the first rude blast will strip them of their delicate white or pale lilac petals, and crush their airy foliage; they are welcome to our boquets.

Claytonia virginica, (Spring Beauty.) The frailness and delicate beauty of this plant, render it worthy of its name. It is found under the protection of some large rock, or decaying stump, opening its pretty pink petals, striped with red, to the gladdening sun.

Arum triphyllum, (Wild Turnep, or Indian Turnep, Jack in the Pulpit.) The curious form, rather than the beauty of this plant, attracts us. Its spathe, striped with purple and green, bending over like a friar's hood, to cover its cup, which is succeeded by a bunch of brilliant scarlet berries, always affords a theme for admiration.

Azarum canadense, (Wild Ginger.) Beneath that decayed log, thrusting aside the fallen leaves, some large and broad kidney-shaped leaves, attached to a kind of subterranean stem, appear, and close in at their base may be found a small purplish flower. The pleasing fragrance of its stem and root, are the chief merits of this plant.

Dentaria diphylla, (Pepper Root.) Along the dry banks of the stream, this may be found producing a spike of white flowers. Its root is large, white, and pungent.

Erythronium americanum, (Dog-tooth Violet.) Another of the welcome harbingers of spring. Very early, its long spotted leaf shoots up in some sheltered spot, succeeded by its flower stalk, bearing a single yellow, lilly-like flower.

Uvularia perfoliata and *sessilifolia*, (Bell Wort.) These are graceful plants, about one foot high, resembling the preceding in their flowers, and the same damp, rich soil produces them.

Sanguinaria canadensis, (Blood Root.) This is one of the earliest flowers. We shall find it in some sunny moist spot in the meadow, under the shelter of a rock, opening its large, pure white petals to the sun, disclosing the yellow stamens within. The blood-red juice which exudes from the stem, as well as the root, when bruised, gives rise to its name. The leaf is like the foliage of the grape-vine.

Caltha palustris, (Water-Cowslips.) Marking the course of the stream as it winds along through the meadow, this plant appears with its gay and yellow flowers, too well known to need description.

Actæa rubra and *alba*, (Necklace Weed.) Before leaving the deep rich soil of the vale, we may find these plants, with clusters of small white flowers; but they are better known when in fruit, the former producing bunches of deep scarlet berries the latter white oval waxen ones, with black spots on their extremities, which, upon their large red peduncles, present a very striking appearance.

Mitella diphylla, (Currant Leaf.) The same fruitful soil has still other treasures for us.

This plant produces a single spike of small white flowers, nearly one foot in height. It exhibits the same tenderness which belongs to most of the flowers of this period. It accompanies the following species, which it much resembles, in the borders of moist woods.

Tiarella cordifolia, (Mitre Wort.) Two opposite leaves upon the flower stalk is the most prominent distinction between this and the preceding.

As we leave the vale already loaded, but not burdened, with our collection, we will direct our course through the open woods, towards yonder rocky and half exposed ledges. We may find on our way the little starry white blossoms of the

Trientalis americana, (Chick Wintergreen,) surrounded by long, narrow pointed leaves, on a slender stalk, about six inches in height. This is one of those pure and spotless things which remind us, that notwithstanding human imperfections, there is a being whose works are perfect.

Aquilegia canadensis, (Columbine.) Having reached the ledge, we find this plant, far surpassing in the delicacy of its foliage and flowers, the cultivated varieties. The sweetness of its pendant red and yellow blossoms, graceful form and luxuriance, always render it a favorite.

Aronia botryapium, (Shad-bush—June Berry.) Growing from the clefts of the same rock, is this shrub or small tree; and even before any foliage appears, it is covered with its snow-white blossoms.

Xylosteum ciliatum, (Fly Honeysuckle.) Sheltered in this thicket we may find this plant; a shrub about five feet high, covered with small yellowish-red flowers, growing in pairs, and very sweet. The bees soon find their way to these delicacies; and what is more cheering on a bright day in spring, than a bush in full leaf and flower, covered with the busy bees, while all around is still, dry and barren.

Trillium erectum, (Wake Robin.) As we descend from the rocky knoll, among the thick shrubs and in a damp soil, is found the wake robin. Its stalk is about one foot in in height, where it sends out three rhomboidal leaves, and is terminated above by one flower with three petals; these are either purple or white, with purple centres. Were it not for its unpleasant odor, this would be one of the favorite flowers of the woods.

Viola, (Wild Violets.) During our rambles we have not failed to gather blue, white and yellow violets; although they are not distinguished for beauty, yet as heralds of summer they are ever welcome. Some of them are sweet scented, (though usually they have no fragrance,) and no bunch of spring flowers is perfect without them. Two years since, I found in a meadow a bunch of violets, which from their rare size and beauty, I removed to the garden. They are blue, striped with white, and upon a little turf of six inches in diameter, there were about fifty flowers.

Polygala pancifolia, (Flowering Wintergreen.) In the border of these pine woods we find this delicate red flower. The plant is about the size of the common wintergreen, yet it produces one or two flowers of rare beauty; often hundreds of them may be found where the fallen pine leaves have checked every other species of vegetation.

Houstonia cerulea, (Venus Pride, Innocence, Bluett, Forget-me-not.) As we emerge into the open field, we still find our path strewed with flowers. This humble and modest little plant, is too well known to need any description; yet abundant as it is, who can tread roughly on the turf which it makes like a soft enameled carpet.

Azalea, (Wild Honeysuckle, May Apple.) Now let us plunge into the deep woods, and where the hand of man has never violated its retreat, we shall find this sweet flower. What lover of nature ever returned from a ramble in our forests in smiling May, without bending his steps to some sequestered spot where he may gather a bunch of these blossoms,

which always attract by their rich color and delicate fragrance. Many species are common, varying in color, but in other respects similar.

Orchis spectabilis, (Gay Orchis.) In woods a little later we may find this species, one of the most delicate of the family, producing spikes of pink flowers about six inches high.

Cypripedium, (Moccasin Flower.) In the same soil, some in the deep forest, and some in its borders, are found the different species of this most beautiful genus. The rich shades of their colors, and delicacy of their markings, are only equaled by their graceful and curious forms, and the most careless rambler would stop to admire them. Yet few plants are as tenacious of their own rights to a congenial soil, and so difficult of cultivation. The *spectabile* is the only species which is found in open grounds, and from its rugged appearance, gives some hope that it may succeed in the garden.

Convallaria, (Solomon's Seal.) We shall find several species of this genus at this season, but none of them equal the one cultivated, (Lily of the Valley,) which belongs to the south.

These may form our boquet of spring flowers; no less beautiful will be those of summer.

Sisyrinchium anceps, (Blue-eyed Grass.) As we wander in the low grassy meadows, this little blue-eye looks up at us on its grass-like stem, and seeks our notice.

Corydalis glauca. We must again turn to the woods, and in their rocky border we may find this delicate biennial; whose singular foliage, of a bluish tinge, and long succession of small yellow and pink flowers, should render it an especial favorite. This and the following species, are much improved by cultivation, both in the size and number of their flowers.

C. fungosa. The deepest and wildest recesses of the forest must be searched for this species. It is a delicate vine, and there I have seen it spreading over the rocks in the greatest profusion. Its airy foliage and curious flower, is similar to the preceding. Another species still, is found in similar localities.

Sarracenia purpurea, (Side-saddle Flower, Pitcher plant.) In our search for summer flowers, we must not neglect to visit yonder peat bog, for cold and forbidding as it looks, some of its productions exceed the bounds of the most erratic fancy. The purple flower of the pitcher plant, with the termination of its pistil expanded so as to cover nearly the whole flower, excites our admiration, but not equally with its cup-shaped leaves; these are rigid, upright, shaped like a sack contracted towards the top, and often holding a gill of water. Here we see a provision made by Providence for maintaining a supply of this necessary element, in addition to that which the roots may obtain.

Calopogon pulchellum, (Grass Pink.) We must not leave the swamp until we have discovered other treasures. The grass pink has a slender stalk of a foot or more in height, and near the top several large purple flowers, which possess the curious forms belonging to the Orchis family.

Pogonia ophioglossoides, (Snake-mouth Arethusa.) Belonging to the same tribe, and standing at its side, we find the arethusa. It has a single purple flower, at the top of a stem rarely one foot in height. Language fails to give any idea of the curious forms this family exhibit.

Pontederia cordata, (Pickerel Weed.) Before leaving the marsh we must visit this little lake, for the bright sun has warmed it, and emerging from its shallow borders are seen the pale blue spikes of the pickerel weed, rising about two feet in height.

Calla palustris, (Water Arum.) This plant, though much inferior to the exotic species, is not devoid of beauty. It is found in slugglish streams, or shallow lakes, with the

Nymphea odorata, (White Water Lily.) Fit dwellings for the undines or water nymphs; we see their large white corols expanded, pure and spotless, on the surface of the deeper water, while their broad glossy leaves extend around them. Their sweet perfume equals their beauty. Having gathered these, shall we not say that we have been richly paid for our visit to this otherwise unattractive spot.

Geranium maculatum, (Crowfoot Geranium, Cranesbill.) We must make another visit to the low meadow and sheltered rivulet, for here now the cranesbill expands its delicate purple petals. This is not inferior to some of the cultivated species, and as it grows in the greatest profusion, the effect it produces is very pleasing.

Lysimachia stricta, (Loose Strife.) There are many species of this genus, of which this is the finest. They grow on the borders of streams, and produce an abundance of small yellow, star-like flowers.

Iris versicolor and *prismatica*, (Blue Flag, Boston Iris.) In the same locality we may find these two species of iris, resembling those cultivated; but the latter one, especially, is more slender and delicate.

Chimaphila maculata, (Spotted Wintergreen.)

Chimaphila umbellata, (Prince's Pine.) The burning sun inclines us to visit the deep shades of the forest, and there we shall still find new charms. These two species are evergreens, and produce clusters of small reddish white, fragrant waxen flowers.

Pyrola rotundifolia and *elliptica*, (Pear Leaf Wintergreen.) The habits of these plants are similar to the preceding, as also their flowers, except they grow on slender spikes.

Mitchella repens, (Partridge Berry.) Where there is some partial opening in the forest, we may find this small evergreen vine, with its dark pink flowers, in pairs, bearing at the same time the red waxen berries of the previous year. Its thick carpet of green is attractive, but its most pleasing feature is its delicate fragrance.

Monotropa uniflora, (Indian Pipe, Wax Plant.) Enter again the deep forest, and we are startled at something which at first sight presents more the appearance of a work of art, than a production of nature. The wax plant, with no green leaves, but the whole stem, as well as flower, of a frosty whiteness, makes us doubt whether it is natural or artificial. An examination of its delicate and perfect corol settles this point. Later in the season the flower turns brown, and from a nodding position becomes upright. It is said to be parasitic on the roots of trees, and is one of nature's greatest curiosities.

Linnæa borealis, (Twin Flower.) This is the only species in our country of this genus, named in honor of the immortal LINNEUS. It is a slender, prostrate vine, found in dry woods, and usually excludes everything else from the space it occupies. Its stalks, each bearing a pair of small pink, sweet scented flowers, rise about four inches. I have seen it but in two localities, and its beauty, and the associations connected with its name, have induced me to make a pilgrimage of many miles to visit it.

Cassia chamæcrista and *nictitans*, (Wild Sensitive Plant.) Leaving the forest, let us now search that arid sandy plain, for since our visit in spring, its vegetation has entirely changed. We shall now find these two species of Cassia, which are very similar, except the flowers of the first are much the largest. They are bright yellow, with dark centres, produced abundantly on their slender branching stems, which grow about one foot high. As the delicate feathery foliage of these little annuals, like the true sensitive plant, folds up at the approach of evening, or of a storm, or when they may be rudely handled or plucked, but more slowly, they are always attractive, even before the blossoms appear; for many years I have cultivated them with perfect ease and success.

Lupinus perennis, (Wild Lupine.) So abundant is this plant in the same localty, as to

be esteemed a weed, yet its numerous spikes of blue flowers render it attractive, and well worthy of notice.

Asclepias quadrifolia and *tuberosa*, (Swallow-Worts.) In that broken wood which borders this sandy plain, thrive these species of Asclepias. The first possesses delicacy of form, and is sweet-scented, but the latter, (the butterfly-weed,) is very showy, with its large clusters of orange colored flowers.

Rosa rubiginosa, (Sweet Briar, Elegantine.) Other species of single wild roses are common, but the sweet briar is the most worthy. The charming fragrance which it exhales at "early morn or dewy eve," the soft and airy expression of its foliage, the unassuming beauty of its flowers, have always rendered it a favorite; and whether we find it adorning some humble cottage, or luxuriating in its native haunts, it ever appears appropriate and beautiful.

Cactus opuntia, (Prickly Pear.) Dry basaltic or trap rocks, are the natural habitat of this plant. I have seen it only at West Rock, New-Haven, Ct. The flower will not compare in beauty with the exotic species, yet the unique appearance of the plant well adapts it to deck some rocky peak.

Campanula rotundifolia, (Hair Bell.) In similar localities, but more generally distributed throughout the state, we may find the hair bell. The round radical leaves of this species give rise to its botanical, and the slender hair-like leaves of the stem, to its common name. Nothing can be more graceful than the delicate nodding blue bells of this plant, supported on their slender stalks, and as they wave over some sunny bank, or sheltered crevice, we can only admire and praise them. Another species, the *Amplexicaulis*, (Clasping Bell-flower,) exhibits the same beautiful blue, but its flowers are half concealed among the clasping leaves of its single upright stem.

Lilium philadelphicum, canadense and *superbum*, (Field and Wood Lilies.) Let us visit these low meadows once more, before the scythe strips them of their mantle, for there and in the adjoining hedge row, among the abundant productions of summer, we shall find much that is beautiful. These three species of lily are each superior to some of the cultivated ones. The first has one or two large, red spotted, upright flowers; the second, one or more nodding yellow, or orange ones, with dark spots; but the third is a noble pyramid of 10—20 bright orange flowers, with purple spots.

Habenaria fimbriata, (Fringed Orchis.) A little later than the lilies, appears in the same situation, this most beautiful species of the Orchis family. Its dense spike of curiously formed purple flowers, ever renders it interesting.

Leptandra virginica. In the borders of that hedge, now may be seen shooting up, the tall spikes of the Leptandra, covered with its pretty white flowers.

Rudbeckia vacciniata. Accompanying it, or among the wild vegetation on the banks of some stream, is found the Rudbeckia, its tall branching stalks, terminated by its large yellow petals, making a very showy appearance.

Cusenta americana, (Dodder.) This is a slender, yellow, parasitic vine, twining about other plants, in damp, shady places. It has small white flowers, and being destitute of green herbage, its curious aspect arrests our attention.

Impatiens pallida and *fulva*, (Touch-me-not, Jewel Weed.) These species are more delicate than the garden balsams, and their flowers are less abundant. These annuals grow so plentifully in some rich, damp situations, where the soil may have been disturbed, as to be regarded as weeds.

Clematis virginica, (Virgin's Bower, Traveler's Joy.) This is a common climbing plant, beautiful when covered with its clusters of white blossoms, but very showy when

the seeds are formed, which, from their long feathery appendages, have given to this plant the peculiar name by which it is often known, of "*devil's head in the bushes.*"

Lobelia cardinalis and *siphilitica.* Few flowers of the garden or green-house equal in brilliancy the scarlet cardinal flower. This, and the latter species, which is blue, in August adorn the banks of our streams with their tall spikes of flowers, and attract the attention of the most careless observer.

Glycine apios, (Ground Nut.) This plant, which from the edible character of its root, has attracted considerable attention in France, is found in the same neighborhood. It is a vine often ten feet in length, with handsome pinnate leaves, and thick clusters of brick-red, papilionaceous flowers; their fragrance is peculiar, strongly resembling that of fine green tea. (It produces a large number of small oblong tubers, the largest about the size of a dove's egg, strung upon its roots four or five inches apart. As freezing does not injure them, they may be dug in autumn or spring; and at the latter season, the only time I have tried them, much resemble a mealy potato, to which they are superior in flavor. From a vine which has stood in my garden for many years, and covers a small trellis, I dig a few handfuls annually, as a curiosity, and the parent stock remains uninjured. Should it improve by cultivation, as the potato has done, it would rival that important plant, and perhaps may become a useful substitute for it.)

Helonias dioicia, (False Unicorn Root.) This plant grows in the open fields, in cold, lean soils. Its flowers are small and white, arranged on a single tall, noodding, white or nearly transparent stem.

Spiranthus tortilis and *gracilia,* (Lady's Tresses.) In the same soil, we shall find the upright, slender stems of these species, surrounded in spiral rows by their white waxen flowers. To beauty of appearance they add a delightful fragrance.

Euchroma coccinea, (Painted Cups.) The corol of this plant is very insignificant, but it is accompanied by a number of scarlet bracts, which give it a very gay appearance. It is found in dry, poor soils.

Epilobium spicatum, (Willow Herb.) A strong plant, often six feet high, with long spikes of purple flowers. It is usually found in rich lands, recently stripped of their growth of timber.

Œnothera biennis, (Tree Primrose.) This is a biennial, so abundant as sometimes to be considered a weed. It delights in cultivation, and continues for a long time to furnish abundantly, its large, lemon-yellow flowers. Many plants, at a particular hour or season, open their corols, but none is more regular or easily observed than this. Soon after sunset its petals expand, not slowly, but with a sudden jerk; so that as they open one after another, the whole plant appears to possess animal life, and where, but a few minutes before, the buds were scarcely seen among the leaves, now appear broad, expanded flowers.

Gerardia flava and *pedicularia,* (False Foxglove.) These plants are distinguished for handsome foliage, and large, lemon-yellow flowers, shaped like the foxglove of the gardens. They grow about two feet high, and prefer dry, open woods.

G. purpurea and *tenuifolia.* These are much smaller than the preceding; their flowers are purple, and they are found in cold, damp soils.

Solidago, (Golden Rod.) It will not be worth while to enumerate the different species of this genus, yet we will not pass it by in silence; for by the abundance of its rich yellow flowers, seen in every hedge row, it adds much to the beauties of summer and autumn.

Gnaphalum polycephalum and *margaritaceum,* (Life Everlasting.) These are also very common, but that does not detract from the honey-like fragrance of the first, or the beauty of the pure white and durable little roses of the latter.

Aster. This is so numerous a family, that during autumn scarcely any locality or soil is without its representative. Its colors are equally varied, exhibiting almost every color except yellow. As they are all very hardy, and bear cultivation well, many of them may worthily occupy some vacant corner, even in a small garden. They remain bright and beautiful, after frosts of considerable severity.

Gentiana crinita, (Fringed Gentian.) Nature seems not to have bestowed all her favors on spring or summer, but to have reserved this one of her most unique productions, for dull and sober autumn. The bright blue color of its petals, their delicately fringed edges, and the fairy-like twist of its buds, always render it one of our favorites. Other species of gentian are found with it, in cold, damp places, but they resemble it only in its rich blue color.

And now, kind friends, as we gather these last flowers of autumn, how changed are our emotions from those which we felt, as full of hope and joy we culled the first blossoms of spring. It is with a kind of melancholy satisfaction, that we prolong the pleasures of summer, by collecting these last delicate productions of nature, even while the rude blasts of autumn are sweeping by, and remind us of coming winter, in which all vegetation must sleep until its frosts are dispelled by the genial breath of spring, again to cheer us with their varied forms of life and beauty. How plainly typical of our final rest and journey hence to the spirit land, where, with new powers, we hope to spend a blest eternity in admiring and praising the perfect works of our Creator. T. S. Gold.

Cream Hill, Ct., March 3, 1851.

TO RESUSCITATE TREES LONG OUT OF GROUND.

BY B. DESPORTES, ANGERS, FRANCE.

Hon. A. J. Downing—Sir: Permit me, through your estimable journal to make known a fact of the utmost importance to your countrymen, who import trees from Europe. And this communication is the more valuable from not being mere theory, but the result of actual experience.

In the spring of 1850, M. Andre Leroy, nurserymen of Angers, in France, imported from an American nurseryman, a large number of fruit trees, evergreens, plants, &c. The season was rather too far advanced when the order was sent, and when the trees arrived at their destination, they appeared to have suffered so much from the length of their journey, and to be in such a dry condition, that if they had been offered for sale, not a single buyer could have been found for them. But the intelligent owner was not easily discouraged. He had them unpacked, and taken to the bank of a stream which runs through his grounds. There he had a wide ditch dug, in which he placed the pear trees, covering them eight or ten inches deep with sand, which extended even upwards among the branches and over the roots, so as to cover them completely. In this condition they remained fifteen days, and on examination he found they were doing very well; he was not able to plant them until six days later, being at the time much engaged with other business; when he drew them from the earth they were in full blossom, and the roots were covered with new white fibres, nearly an inch long. The ground they were planted in was trenched and enriched with stable manure. Fearing that the roots were too small and feeble to nourish such long branches at that advanced season, he thought it prudent to shorthen in the trees for six or eight inches. Only two of them were lost; and although

some of them did not advance much, all, nevertheless, seemed healthy and vigorous. Some of the sorts have made four feet of new growth.

There were two thousand young pear trees, which were also a little dry, but by burying them under-ground some time before planting them, we succeeded with the greater number, that is to say, four-fifths are living and doing well. The quinces and other fruit trees were buried not in sand, but in earth which was too moist, on account of the abundant rains of that season, so that we were less fortunate with them, as well as with some young plants of the Cedar of Lebanon. The Larches, Mahonias, Hollies, Norway spruces, Rhododendrons, Judas trees, Filberts, &c., all flourish well.

This method has been known to us for some time past, and we have already pointed it out on the first page of our catalogue; these facts now serve to corroborate its value.

We also made the experiment during the past winter, with seventy-two rose bushes that were left out of the ground during three months; we had them covered with nearly six inches of earth, for the space of eighteen or twenty days; we planted them afterwards in the midst of others, which had not been subjected to this test, and we lost only five out of the whole number. All the others grew and flourished as usual.

This method cannot be too much urged upon those persons who receive their trees in too dry a condition.

B. DESPORTES,

At Andre Leroy's Nursery, Angers, [France,] Feb. 5, 1851

Having made trial of the above method, we can vouch for its efficacy. We will add to it, that trees which are imported when not in a growing state, should never be packed in *wet* moss, (ignorant packers often put them up for a long voyage as if they were going 100 miles at home,) but always in *dry* moss. In the latter case, they never heat or start to grow—in the former, always. If they are over dry, they are easily recovered by *burying* them in earth, (*not too damp*) as our correspondent suggests. If they have been forced into vegetation by being enveloped in damp moss, they are often wholly, always half ruined. ED

GARDEN UTENSILS.

[FROM THE GARDENER'S MAGAZINE OF BOTANY.]

THE annexed engraving represents some Belgian novelties of the class of garden utensils, and may, perhaps, be suggestive of some improvements in the mode of watering plants. The figures and descriptions are taken from *La Belgique Horticole.*

At the Agricultural Institute of Hohenheim, a new method of watering plants and gardens was brought into notice, and which, in German, is called *Schnellgiesser;* in Flemish, *Schnelgieter;* and in French, *Arrasoir a la minute,* (all three terms signifying, literally, *quick waterer.*) Figure 1 shows this invention with the mode of applying it. It consists of a wooden tub, bound by hoops of iron, furnished at the top with iron handles, and in front with two stout leather straps, by which it is suspended from the back of the workman. At the bottom of the tub is a copper socket, to which a gutta-percha or India-rubber pipe is attached, and at that part of this pipe, which may be conveniently held by the hand, there is a small turn-cock, and beyond this a spout and rose, the latter having the holes below. The tub contains as much water as the workman can carry, and when it is empty it is not taken off his back, but filled at the pump by a second person. The turn-cock enables the operator to stop or discharge the water at pleasure. By this contrivance

a great saving of time and labor is effected. [Some adaptation of this idea might be useful.]

Figure 2 represents a new pot constructed to prevent worms from entering at the bottom. in some gardens, where the earth is rich, the earth-worms are very troublesome, especially when the ground is damp. In these localities the worms crawl into the pots by means of the hole at the bottom, and if they commit little injury in the open ground, they are not so harmless among the roots confined in a pot. In order to obviate the evil arising from their intrusion, the new form of pot represented at figure 2, has been invented by M. Ghyselin, potter at Brussels. The bottom is distinguished by having three feet, which are only prolongations of the pot. The bottom is thus raised above the ground, and the worms are thereby prevented from entering at the hole. This pot has also the advantage of facilitating the circulation of air, and preventing the stagnation of water. [Worms, however, do not always enter garden-pots through the drainage hole, but sometimes, especially in small pots, from the top. Against this the proposed form offers no safeguard. After all, the best plan is to take care on what foundation the pots are set.]

Among the useful horticultural contrivances, may be noticed the iron trellis, represented at figure, 3, which combines solidity, elegance and lightness, qualities never found together in wooden trellises. The iron trellis, too, preserves all the forms or shapes which are given to it, and one may thus train plants in all the varied styles which are otherwise inapplicable. The form which is used has a circular head, like a parasol, consisting of four wires, which are bent and sustained in their position by three circles or hoops, the undermost considerably stouter than the others. The stem is supported at the base by three prongs, which are made so as to admit of being fixed in the ground or in a pot. This form, when made from three to four feet high, produces a very good effect, when used to support such a plant as Calystegia pubescens, which looks remarkably well trained to this form of trellis. This same form may be used in training climbing roses, in pots or in the open ground; their branches being led over the arches so as to cover the whole, present a mass of flowers in the summer time.

CONDITION AND PROSPECTS OF GARDENERS IN THE U. STATES.

BY THOMAS MEEHAN, PHILADELPHIA.

I have often been struck, Mr. Editor, by the accuracy and truthfulness with which the predictions of the late J. C. LOUDON, with regard to the progress of horticulture in America, are daily becoming verified. In his time, he found that in "all the more difficult operations of the art, every man was his own gardener"—but he thought that "as a number of professional gardeners had of late emigrated from Britain, and horticultural societies were about to be established, the science of gardening would soon be disseminated every where." Mr. LOUDON was also of opinion that horticulture would never be carried on by individuals in America, to the grand and magnificent extent that it is in England; but that it would have a greater number of patrons, a wider field for its operations, and be a means of greater enjoyment to its inhabitants, than to those of any country on the globe. We have only to look at gardening then, and merely glance at it now, in order to be convinced of the justice of this view. Gardening is progressing, and gardeners are more prosperous; but both can be made more so by a little consideration.

A few days ago, one of our city papers, "*The Public Ledger*," in speaking of the commercial progress and prospects of Philadelphia, came down like a thunderbolt on a sect of philosophers which it calls "waiters on Providence," whose creed teaches that everything in this world must "bide its time," and that nothing can be forced beyond the destiny of nature. Now I do not believe that such a sect exists among gardeners, for we all know too well that unless we put our crops in the ground at the proper season, or our fires on our forcing houses, not the firmest faith in the "wait on Providence" doctrine, will aid us. We are all practically acquainted with the truth of Æsop's fable of Hercules and the Wagoner, and know how the weight of all our results must bear on our own shoulders. Notwithstanding all this, we depend too much on the course of events for the advancement of the interests of our profession.

I am one of those men, Mr. Editor, who are somewhat selfish. It was my misfortune to be taught by the village schoolmaster, that "number one was the first law of nature." I strive, and have ever strove, to advance the interests of gardeners and of gardening; but I do not, nor have I ever done so, from any mere feeling of philanthropy, but from a firm faith in the belief that, by furthering the interests of gardening, I am contributing to my own. It was doubtless the same consideration which prompted the English government to adopt ROWLAND HILL'S suggestion of penny postage on letters. It was not merely because it was contributing to the convenience and consequent happiness of its subjects, but because, by increasing the circle of its postal patrons, it was evidently increasing its own revenue. It is not an incumbent duty—at any rate it is not general for the followers of any profession, to inquire whether their profession is to the increase of the pleasures or happiness of mankind, or not,—but gardeners have the advantage of knowing, whenever that question does arise, "that the garden is the purest of all human pleasures," and that no profession under heaven affords such abundant material for looking from "nature up to nature's God." While, therefore, they aim at the increase of their patrons—while they strive by every means in their power, to diffuse a love of nature as displayed in gardening, and while, by their untiring endeavors, gardening is flourishing and prosperous, they have the advantage of knowing, in the language of LINDLEY, that they are contributing to "the augmentation of the luxuries and comforts, and the diminution of the

wants and miseries of mankind," at the same time that they are administering to the interests of themselves.

"Gardeners are badly paid"—"there is no profession of whose members so much and so varied duties are required, at so small a remuneration." These have now become proverbs. To be "paid like a gardener," has become parallel to be "shod like a shoemaker's wife." But how can this be remedied? Not by repining or complaining, but by constant and untiring endeavors to show that we are worth more than we get—by leaving nothing undone that may let those who employ us know that our profession is a difficult one, and requires much cost and labor to arrive at any perfection in—and by leaving no opportunity to pass by which may lead us to the intelligence of how we may still be more useful to those who employ us.

It has been remarked by a correspondent in the July number of this Journal, that "a dozen gardeners, who live with some of the first merchants in New-York city, do not receive more money than is paid their porters for the scientific purpose of nailing up a packing box." I have reason to believe that American employers are far more open to a sense of the justice of a fair remuneration to useful intelligence, than English gentlemen; and I would suggest the merchants in question are unacquainted with the labor and cost that it requires to make a first rate gardener; at any rate never have given it a thought. The gentlemen which Mr. QUINN alludes too, as giving fair wages to their gardeners, do know this fact, and hence arises the difference. I know a fine garden in Connecticut, that has some fine plant houses, in which some plants are grown that would not disgrace a Chiswick exhibition, and which has or had as clever a gardener as ever came to this country. This gardener was one of the "badly paid." Upon inquiring I found that none of the members of this family ever went into the garden or plant houses, from one month's end to another. Can we expect gentlemen to pay for what they take no interest in?—or even if they do happen to take an interest,—for what they do not understand?

As I write these lines, I am strongly reminded of a maxim I learned while connected with commercial gardening:—"He who can raise enough stock to supply a large and varied market, is a 'smart' man; but he who can *make* a market for his stock, and bring in its full value where no market already exists, is a 'smarter.'" In another sense, this should be the aim of gardeners. If they find that they do not receive that remuneration which their services are worth, and that a main cause of that is a want of interest by employers in their profession, together with a want of knowledge as to its pleasures, and the cost and labor which the gardener has had to put himself to, to make himself capable of administering those pleasures—then it must be apparent that the removal of these obstacles alone, must be his object. One great means of effecting this, is to promote the extension and usefulness of horticultural societies and publications. They demand the enthusiastic support of the gardener. I have met with some gardeners who denounce them. I remember well that when the *Gardener's Chronicle* was first started in England, the majority of gardeners in our district denounced it. It was asserted that employers already "knew enough," and that if "such things" were encouraged, "the gentry" would soon "know as much as themselves." A few gardeners, with more judgment, knew that the more intimately the "gentry" were acquainted with gardening, the more they would be acquainted with the worth of a gardener, and the more interest they were likely to take in its pursuits. The sequel showed the correctness of their judgment. For few men would now deny that the *Gardener's Chronicle* has done more in its establishment towards the present position of gardening in England, with regard to its patron-

age, than in the existence of any other circumstance, whatever. Where one patronised gardening before it started, ten did afterwards. Some evils, of course, attended the improvements; but every move in the course of progress, disturbs something settled.

Not only by means of horticultural societies and publications, ought a gardener to diffuse a knowledge of his profession, and its pleasures and profits, but by a thousand-and-one other means that will readily suggest themselves, according to the circumstances around him. I know a gardener who accidentally fell in with a military officer. This gardener was not one who thought it dangerous "to tell others for nothing, what it had cost him something to learn." The conversation turned upon grafting and budding. The gardener explained the whole process, and illustrated it by experiments. This gentleman was, of course, learned how to do without a man to bud roses or pear trees, which, I believe, he would never have thought of requiring; but if my memory serves me right, that gentlemen who had never owned a flower before, so pleased with the success of his experiments in budding, has been led to keep a garden, and employ a gardener.

Not only is it our interest to take every available means of spreading a knowledge of our profession, but it is also incumbent on us to study by what means to render that knowledge easy to be acquired by those who are willing to learn. With this view, I am proud to find LINDLEY and others, agitating for a reform in the names of plants. The fact is, that if botanists do not take this matter into their own hands, the people will for them. We have tried it already in Philadelphia, and a pretty mess! "Johnny Jump-up," Glory of the world, Elephant's Ear, Pig's Nose, Catsfoot and Lion's Tail, are specimens of the names some plants have got. One time, when a lady unacquainted with plants, yet anxious to learn, would ask me the name of some plant, I would feel ashamed to have to bring out such names as my Robalanus and my Robatindus,—Pleuroschis motypus, or Nowad Worskia; and I have rejoiced when I could get a Phalœnopsis into a "Moth Flower," or a Peristeria to the "Dove Plant." Every one knows how necessary it is that one universal science should have one universal language; but there can be no reason why the botanist who names his plant, should not also give it a common name. I so feel the necessity of this, that I cannot wait for them. In naming my plants, I put the English name on one side, and the botanical on the other. Where the plant has no English name, but is named after some individual, as in *Russelia*, for instance, I make the English "Russel Flower." I tried to translate many of them literally, but such names as Melastoma and Sterculia, frightened me, just as one would be who tried to get a French Catalogue of pears into English, when he met with such names as Pater Noster, La Cuisse Madame, or Ah Mon Dieu!

It seems to me, Mr. Editor, that the reform in the nomenclature of plants is a subject which does not concern the botanist, and one which he is not likely to meddle with. On the other hand, it is one which no one horticulturist is ever likely to try his hand at. The only chance that I see of an uniform standard of common and easy names ever being brought into use, is by a committee appointed by either the Pennsylvania or Massachusetts Horticultural Society, to ascertain and arrange the best common names the plants in the United States have obtained, and give names to those which have none. Nurserymen would adopt them, and their use would soon become general. Unless something of this kind is done, I fear all talk about reforms will end in *talk*. Such a reform is tenfold more necessary here than in England. The classes there who take an interest in flowers, have been familiar, from their infancy, with the classics, and a name in Latin or Greek, is the same to them as their own tongue. In this country, the wealthiest are those who by their commercial talents, and unwearied industry, have raised themselves to the positions they

occupy, and to the majority of whom HOMER, or HORACE, would be as intelligible as the language of SI-SAN, or SADI the Persian. It is only by associating the names of plants with some name we have heard before, that any of us can make much progress in the commencement of our career. I can only answer for myself, that I should never have learned *Anagallis*, but for connecting it with "hang the gallows," nor *Camellia* without "Amelia." At any rate, it is a subject which would well repay the attention of horticultural societies, as, were the names of plants in the common language, the knowledge, and consequently the love and cultivation of plants, would much increase.

These, and kindred subjects, are well worthy the attention of gardeners. They tend to the advancement of their profession,—as does every thing which tends to increase their already extensive intelligence. The success of a PAXTON—JOSEPH PAXTON, gardener—in beating in the field of competition, the whole host of British architects engaged in designing the building for the "Exhibition of the Industry of all Nations," does more towards raising gardeners and gardening to their proper position, than all the talk about low wages would do in a century. Let not American gardeners despair. Their profession is yet destined to be held in higher estimation here, than it ever has been in any nation in the world. The time will assuredly come, when every large city in the Union will vie with each other in the splendor and magnificence of their *public* gardens, as compared to which, the majority of gardens in England will be children's play grounds. THOMAS MEEHAN,

Gardener to A. M. Eastwick, Bartram Bot. Garden, Philadelphia.

RANDOM NOTES ON SOUTHERN HORTICULTURE.

BY SYLVANUS, NEW-ORLEANS.

I was taking a stroll the other morning among the old faishioned gardens of New-Orleans, which are just beginning to be inviting, after the gloomy and cheerless winter, when it occurred to me that a few random notes on the subject of what does or does not, grow in this region, might be acceptable to your columns. I plucked a Chromatella rose, such in size and color as would make your heart glow to look on, and sauntered home to fulfill my intention. It was near the first of March, and—do not feel envious—green peas were ready for the table; as I passed a coffee-house, the fragrant scent of fresh mint, as some dry citizen was imbibing a julep, floated invitingly into the street, and—restrain your feelings—a bowl of fresh strawberries, the very first of the season, had that morning been announced as having been deposited in the *sanctum* of some lucky editor. The next day "came a frost, a killing frost—pea blossoms wilted, strawberries soured, and mint-juleps gave way to hot toddies." But this lasted only a few days. The weather has cleared up; peach and plum trees are in full blossom, the forest has assumed its livery of green, and the whole air is fragrant with odours. Spring is here at last, but I do not find that the charms of nature are so highly appreciated here as in the colder north. At least, so much attention is not paid to horticulture as a science. The south is generally considered as the land of flowers, and nature has done her best to make it so, but as yet, in this quarter, at least, but little attention is paid to gardening, beyond laying out an acre or two on plantations, and in the suburbs of the city, in a few of the more common fruits and flowers that are indigenous to the soil, or have been long introduced. Yet along the coast of the Mississippi, for sixty miles above and below New-Orleans, might be grown all the most beautiful trees and shrubs of the tropics, with but slight, or even no protection whatever.

There are, however, some serious drawbacks to horticultural enjoyment in this vicinity. The coast, as it is here called, is nothing but a strip of land of about a mile in width, bounded on one side by the Mississippi, on the other by a densely wooded swamp, entered by few except runaway negroes, hunters, or very devoted lovers of nature. The land is very low, indeed perfectly flat, and always damp, for by digging a few feet, you can reach water that is brackish and unwholesome. The soil, though rich in the extreme, is unsuited to many kinds of trees, and the long continued heats to which it is exposed, render it highly unfavorable to others. Then, too, however beautiful and tasteful may be the shrubberies and gardens, they are at all times too damp for any long-continued out-door enjoyment. There are no rich green grass swards, for grass does not flourish in this climate, and if there were, you could not lie upon them. A little insect, called the "*bete rouge*," or red bug, would soon penetrate your skin, and make you the nest of its interesting family; the dampness would bring on your rheumatism; and instead of indulging in pleasant thoughts, your time would be taken up in dealing destruction to the myriads of musquitoes swarming in clouds around you, seeking an opportunity to get a taste of you.

Yet is the vegetable growth beautiful to look upon. Immense live oaks expand their arms over you, and shelter you from the sun. The orange, the pomegranate, and the lemon, invite you by the fragrance of their blossoms, and the lusciousness of their fruit. The Jessamine makes the air heavy with its oppressive odor, and a stranger would, in the earlier months of spring, reap much enjoyment from a visit, if he could be satisfied with flowers and fruits alone.

As you approach New-Orleans, descending the river, the view on either bank is quite attractive. You can scent the odor of the flowers. You can hear the notes of the mocking bird, and see hundreds of these merry bucks of the woods, flitting from tree to tree, as untiring as young kittens in their sports.

But the admiration you feel and express, is, I think, more the result of contrast with the dull and heavy wilderness through which you travel for several days before you reach what is called the coast. Though nature has done much to adorn the scene, art has done little or nothing. And your admiration, should you chance to stop at any of the numerous plantations, would cease. You would be astonished at the few varieties of trees and shrubs, and flowers, you would meet with, and surprised at the meagreness of what seemed so powerfully attractive in the approach. Notwithstanding all the praises bestowed upon the sunny south, in this part of it, at least, Landscape Gardening is half a century behind the age. I say this after many years acquaintance with the gardens of both town and country. Even with the wealthiest planters, those who count their slaves by hundreds and their acres by thousands, and have the incomes of the nobles of England, a garden seems a superfluity, except, indeed, a kitchen-garden, and even that is left to the care of some superannuated negro, who can no longer be made profitable in the field. The French Creoles are fond of gardening, but it is in a small way, and indeed, their fondness for it is more connected with the idea of profit than of pleasure. There are many families in New-Orleans, highly respectable, who make a handsome support from the products of their gardens, principally flowers, which here are always in demand, particularly when the city is filled with strangers, as is usual for about two-thirds of the year. But their flowers are usually of the most ordinary kind, and that require but little labor or care in the cultivation, such as roses, acacias, violets and camellias, which latter, however, generally bring from one to two dollars. I have known a single bush bring as high as ten dollars, on some extraordinary occasion, when scarce.

There is a public garden about six miles from the city. It is a common resort, particu-

larly on Sundays, when, as it is easily accessible by railroad, thousands flock to it to get a little fresh air and a nosegay. It is laid out in the English style, and is a pleasant place of retreat from the heat and stench of this dirtiest of all cities. It, however, possesses no horticultural or botanical attraction. The garden is a source of profit from its flowers, but I suspect more money is made from the sale of liquor in the hotel which is connected with it. It is owned by the railroad company, and is the only attraction at that terminus of the line.

But there are many quiet, snug little gardens and delicious retreats, scattered here and there, through the city and its suburbs, giving a little variety to the ungainly masses of brick and mortar that constitute our squares, for except in public buildings, New-Orleans possesses no architectural beauty. As the city becomes Americanised, more and more taste seems to be developed. The houses are built back from the street. Trees are planted. Shrubberies unfold their sweets, and an idea begins to prevail, that there are other pleasures besides the gathering of dollars, and filling the stomach with dainties from the market.

The markets here are poorly supplied with vegetables. Celery is brought from the west, as are cabbages; every boat that comes down in the fall being literally covered with the latter. Strawberries are very scarce, and very acid, as a general rule. I have, however, seen fine ones in the gardens upon the coast. They are just beginning to find out how to cultivate them. I was on a visit last year, to a plantation not far from the city, the proprietor of which took me out one fine morning to admire his strawberry beds, which were white with blossoms. He remarked that it was singular he never could raise any, though his plants seemed to bloom well, and had the greatest attention paid to them. He had tried to raise them for five years, and was about giving them up in despair. I examined his plants, and found they were nearly all males. I explained to him the distinction, which, though he had heard of, had never been pointed out to him before. It appears he had purchased his plants from some dishonest nurseryman in the west, who had taken advantage of his ignorance on the subject, and got rid of his barren plants at a high price. This year he will have a fair crop, as will many of his neighbors, who have heretofore been in the same predicament as himself. While on the subject of strawberries, I will correct an error of the great LINNÆUS, who has said that strawberries were good for the gout. A friend of mine tried the experiment, and literally "put his foot into it," for he was rewarded for his indulgence by a very sharp fit of that by no means pleasant disease.

Within the last year or two, I have seen very fine Cauliflowers in the market. The Artichoke, which, when properly cooked, is a delicious vegetable, is here a great favorite, and very common. Every garden, of course, contains a space devoted to Okra. Water-melons will grow here, but are very insipid, while the green fleshed Nutmeg Melon, is nowhere more delicious. Figs and Oranges are abundant, while the Pear, Cherry, and the Plum, (except the wild kinds,) do not thrive at all. Bannanas grow and bear readily in the open air, but in very cold seasons are apt to be killed to the roots, when it requires two years for them to bear again. They are, however, imported in profusion from Havana, with Oranges and Pineapples, and other tropical fruits. The Olive will stand the winter here, and bear well, and might be made a source of profit; but I have only seen it grown on one or two plantations, and then only as a curiosity.

As I have before stated, there is not much true horticultural taste here, or much knowledge of trees and shrubs, either in town or country. Perhaps one reason is, that there are no large nurseries, from which trees and shrubs may be seen and procured. There are several nurseries on a small scale, in the vicinity of the city, but they contain nothing but

the most common sorts of trees, flowers and shrubs, such only as meet with a ready sale; such as Peltisfurmus,[?] Magnolias, Arbor Vitæs, Cedars, Oleanders, Tallow trees, (introduced only within the last few years,) and any quantity of roses. The most beautiful tree I have yet seen in the south, is the Date Palm. It resists the cold weather, grows with remarkable rapidity, and yet is rarely planted, or to be found in the nurseries. The largest here, is one standing in an old stable yard, and receives no care or protection. It is supposed to have been planted by the Jesuits some sixty years since. It is from thirty to forty feet in height, and perhaps eighteen inches in diameter. I have seen it in flower, but of course, standing alone, without a male, it bears no fruit. There are one or two others in the city; one is now in sight from my window as I write. Though planted only about twenty years ago, it is thirty feet high, and ten inches in diameter.

The *Mespilus Japonica* has become quite a favorite tree here. The fruit is no addition to our stock, but the tree is beautiful, and withstands the cold even better than the Magnolias, native though they are. But after all, no tree is more deservedly a favorite than the *Magnolia grandiflora*. It is almost the only tree from the woods that is thought worthy of being transplanted into the shrubbery—a great mistake, by the way. In the city during winter, it is rather meagre, and suffers more from the cold than it does in the woods. There, however, it is always beautiful. I once traveled up the Mississippi during the season of its bloom. Occasionally our boat would sweep in sight of a forest of Magnolias, which, covered with their beautiful and fully expanded flowers, presented one of the most beautiful sights I ever witnessed. As we neared the shore, the whole air seemed laden with fragrance, and to add interest to the scene, a flock of bright-winged Paroquets were glancing amid the green foliage and the luxuriant undergrowth of the forest. The *Magnolia glauca* grows freely in the swamps, but it is seldom seen in the gardens. It may be considered here, as much an evergreen as the grandiflora. The Sweet Gum is another common tree here, and in my opinion the most beautiful. When it has attained any great size, it is covered with a peculiar corky excrescence on the branches, that, when it sheds its leaves, gives it a singular and not uninteresting appearance.

The deciduous Cypress is the most common tree of the swamps and woods, but it is rarely applied to any ornamental use, beautiful as it is. Both Loudon and Michaux fall into the error of supposing the timber of this tree to be durable. It decays sooner than that of almost any other tree, and is peculiarly susceptible to the attacks of insects, when employed in the construction of houses. It grows to an enormous size, and presents a remarkable appearance with, (as is almost always the case,) its branches covered with the huge green moss peculiar to this climate. In walking through the forest, one is struck with the singular excrescences called Planter's or Cyprus Knees, that rise in every direction from the roots, from two to five feet in height. They never vegetate.

I have not been able to find either the *Gordonia lasianthus* or *pubescens* in the nurseries; nor, indeed, have I found a single nurseryman here that knows them even by name. Yet they are natives of the south, and from their habits of flowering very early, are well worthy of any shrubbery. Until it attains great age, the Live Oak is far from being a beautiful tree. A collection of them looks exactly like an old apple orchard. In the spring of the year, the Water Oak is far more beautiful. Its bright green leaves, which put forth very early, are really beautiful.

The grape-vine does not produce well here. Higher up, at Natchez, there are several vineyards. The principal grape cultivated is the Scuppernong or Roanoake. It is said to make a palatable wine. In a small yard in Natchez, attached to the residence of Mr. James Carson, a gentleman of that place, who delights in horticulture, stands what I

believe to be the original of the far-famed Ohio, or Cigar-box Grape, of Mr. LONGWORTH. The leaves and growth of the plant are the same, and no difference exists in the taste of the fruit or the formation of the bunches. It is there known by the name of the Jack Grape, so called from an old Spaniard of the name of JAQUES, who introduced the vine. I do not think it a native grape. The vine, when I saw it in 1840, was trained to a small arbor, and had on it more than *two thousand bunches* of grapes, many of them a foot in length. Mr. C. imformed me that many years previous he had sent Mr. LONGWORTH the cuttings from this vine, on several occasions as opportunity offered, but had never heard of their being received. There are other matters in and about Natchez, in the horticultural line, worthy of notice, but as my notes have already exceeded what I intended, I must conclude for the present. SYLVANUS.

New-Orleans, March 20, 1851.

THE PEOPLE'S PARK AT BIRKENHEAD, NEAR LIVEROOL.

BY W., STATEN ISLAND, NEW-YORK.

BIRKENHEAD is the most important suburb of Liverpool, having the same relation to it that Brooklyn has to New-York, or Charlestown to Boston. When the first line of Liverpool packets was established, there were not half a dozen houses here; it now has a population of many thousands, and is increasing with a rapidity hardly paralleled in the New World. This is much owing to the very liberal and enterprizing management of the land-owners, which affords an example worthy of consideration in the vicinity of many of our own large towns. There are several public squares, and the streets and places are broad, and well paved and lighted. A considerable part of the town has been built with uniformity, and a reference to general effect, from the plans, and under the direction of a talented architect, GILLESPIE GRAHAM, Esq., of Edinburgh.

We received this information while crossing the Mersey in a ferry-boat, from a fellow passenger, who, though a stranger, entered into conversation, and answered our inquiries, with frankness and courtesy. Near the landing we found, by his direction, a square of eight or ten acres, enclosed by an iron fence, and laid out with tasteful masses of shrubbery, (not trees,) and gravel walks. The houses about were detached, and though of the same general style, were sufficiently varied in details not to appear monotonous. These were all of stone.

We had left this, and were walking up a long, broad street, when the gentleman who had crossed the ferry with us, joined us again, and said that as we were strangers, we might like to look at the ruins of an abbey which were in the vicinity, and he had come after us; that if we pleased he might conduct us to it. What an odd way these Englishmen have of being "gruff and reserved to strangers," thought I.

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Did you ever hear of Birkenhead Abbey? I never had before. It has no celebrity, but coming upon it so fresh from the land of Youth as we did, so unexpecting of anything of the kind—though I have since seen far older ruins, and more renowned, I have never found anything so impressively aged.

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At the Market place we went into a baker's shop, and while eating some buns, learned that the poorest flour in the market was American, and the best, French. French and

English flour is sold in sacks, American in barrels. The baker asked us if American flour was *kiln dried*, and thought it must be greatly injured, if it was not, on that account. When we left, he obligingly directed us to several objects of interest in the vicinity, and showed us through the market. The building is very large, convenient, and fine. The roof, which is mostly of glass, is high and airy, and is supported by two rows of slender iron columns, giving to the interior the appearance of three light and elegant arcades. The contrivances to effect ventilation and cleanliness, are very complete. It was built by the town, upon land given to it for the purpose, and cost $175,000.

The baker had begged of us not to leave Birkenhead without seeing their new Park, and at his suggestion we left our knapsacks with him, and proceeded to it. As we approached the entrance, we were met by women and girls, who, holding out a cup of milk, asked us—"Will you take a cup of milk, sirs! Good, cool, sweet, cow's milk, gentlemen, or right warm from the ass." And at the gate were a herd of donkies, some with cans of milk strapped to them, others saddled and bridled, to be let for ladies and children to ride.

The gateway, which is about a mile and a half from the ferry, and quite back of the town, is a great massive block of handsome Ionic architecture, standing alone, and unsupported by anything else in the vicinity, and looking, as I think, heavy and awkward. There is a sort of grandeur about it that the English are fond of, but which, when it is entirely separate from all other architectural constructions, always strikes me unpleasantly. It seems intended as an impressive preface to a great display of art within. But here, as well as at Eaton Park, and other places I have since seen, it is not followed up with great things—the grounds immediately within the grand entrance being very simple, and apparently rather overlooked by the gardener. There is a large archway for carriages, and two smaller ones for those on foot; on either side, and over these, are rooms, which probably serve as inconvenient lodges for the laborers. No porter appears, and the gates are freely open to the public.

Walking a short distance up an avenue, we passed through another light iron gate into a thick, luxuriant, and diversified garden. Five minutes of admiration, and a few more spent in studying the manner in which art had been employed to obtain from nature so much beauty, and I was ready to admit that in democratic America, there was nothing to be thought of as comparable with this People's Garden. Indeed, I was satisfied that gardening had here reached a perfection that I had never before dreamed of. I cannot attempt to describe the effect of so much taste and skill as had evidently been employed; I will only tell you, that we passed through winding paths, over acres and acres, with a constant varying surface, where on all sides were growing every variety of shrubs and flowers, with more than natural grace, all set in borders of greenest, closest turf, and all kept with most consummate neatness. At a distance of a quarter of a mile from the gate, we came to an open field of clean, bright, green-sward, closely mown, on which a large tent was pitched, and a party of boys in one part, and a party of gentlemen in another, were playing cricket. Beyond this was a large meadow with rich groups of trees, under which a flock of sheep were reposing, and girls and women with children, were playing. While watching the cricketers, we were threatened with a shower, and hastened back to look for shelter, which we found in a pagoda, on an island approached by a Chinese bridge. It was soon filled, as were the other ornamental buildings, by a crowd of those who, like ourselves, had been overtaken in the grounds by the rain; and I was glad to observe that the privileges of the garden were enjoyed about equally by all classes. There were some who even were attended by servants, and sent at once for their carriages, but a large

proportion were of the common ranks, and a few women with children, or suffering from ill health, were evidently the wives of very humble laborers. There were a number of strangers, and some we observed with note-books, that seemed to have come from a distance to study from the garden. The summer-houses, lodges, bridges, &c., were all well constructed, and of undecaying materials. One of the bridges which we crossed was of our countryman, REMINGTON'S patent, an extremely light and graceful erection.

I obtained most of the following information from the head working gardener.

The site of the Park and Garden was ten years ago, a flat, sterile, clay farm. It was placed in the hands of Mr. PAXTON in June, 1844, by whom it was laid out in its present form by June of the following year. Carriage roads, thirty-four feet wide, with borders of ten feet, and walks varying in width, were first drawn and made. The excavation for a pond was also made, and the earth obtained from these sources used for making mounds and to vary the surface, which has been done with much *naturalness* and taste. The whole ground was thoroughly under-drained, the minor drains of stone, the main, of tile. By these sufficient water is obtained to fully supply the pond, or lake, as they call it, which is from twenty to forty feet wide, and about three feet deep, and meanders for a long distance through the garden. It is stocked with aquatic plants, gold fish and swans.

The roads are McAdamised. On each side of the carriage way, and of all the walks, pipes for drainage are laid, which communicate with deep main drains that run under the edge of all the mounds or flower beds. The walks are laid first with six inches of fine broken stone, then three inches cinders, and the surface with six inches of fine rolled gravel. All the stones on the ground which were not used for these purposes, were laid in masses of rock-work, and mosses and rock-plants attached to them. The mounds were then planted with shrubs, and Heaths, and Ferns, and the beds with flowering plants. Between these, and the walks and drives, is everywhere a belt of turf, which, by the way, is kept close cut with short, broad scythes and shears, and swept with house-brooms, as we saw. Then the rural lodges, temple, pavilion, bridges, orchestra for a band of instrumental music, &c., were built. And so, in one year, the skeleton of this delightful garden was complete.

But this is but a small part. Besides the cricket and an archery ground, large valleys were made verdant, extensive drives arranged—plantations, clumps, and avenues of trees formed, and a large park laid out. And all this magnificent pleasure-ground is entirely, unreservedly, and forever the People's own. The poorest British peasant is as free to enjoy it in all its parts, as the British Queen. More than that, the Baker of Birkenhead had the pride of an OWNER in it.

Is it not a grand good thing? But you are inquiring who *paid* for it. The honest owners—the most wise and worthy town's people of Birkenhead—in the same way that the New-Yorkers pay for the Tombs, and the Hospital, and the *cleaning*, (as they amusingly say,) of their streets.

Of the farm which was purchased, one hundred and twenty acres have been disposed of in the way I have described. The remaining sixty acres, encircling the Park and Garden, were reserved to be sold or rented, after being well graded, streeted and planted, for private building lots. Several fine mansions are already built on these, (having private entrances to the park,) and the rest now sell at $1.25 a square yard. The whole concern cost the town between five and six hundred thousand dollars. It gives employment at present, to ten gardeners and laborers in summer, and to five in winter.*

* "When the important advantages to the poorer classes, of such an extensive and delightful pleasure ground, are taken into consideration, no one will be inclined to say that such an expenditure does not merit the most unbounded suc-

The generous spirit and fearless enterprise, that has accomplished this, has not been otherwise forgetful of the health and comfort of the poor.* Among other things, I remember, a public wash and bathing house for the town is provided. I should have mentioned also, in connection with the market, that in the outskirts of the town there is a range of stone slaughter-houses, with stables, yards, pens, supplies of hot and cold water, and other arrangements and conveniences, that enlightened regard for health and decency would suggest.

The consequence of all these sorts of things is, that all about, the town lands, which a few years ago were almost worthless wastes, have become of priceless value; where no sound was heard but the bleating of goats and braying of asses, complaining of their pasturage, there is now the hasty click and clatter of many hundred busy trowels and hammers. You may drive through wide and thronged streets of stately edifices, where were only a few scattered huts, surrounded by quagmires. Docks of unequalled size and grandeur are building, and a forest of masts grows along the shore; and there is no doubt that this young town is to be not only remarkable as a most agreeable and healthy place of residence, but that it will soon be distinguished for extensive and profitable commerce. It seems to me to be the only town I ever saw that has been really built at all in accordance with the advanced science, taste, and enterprising spirit that are supposed to distinguish the nineteenth century. I do not doubt it might be found to have plenty of exceptions to its general character, but I did not inquire for these, nor did I happen to observe them. Certainly, in what I have noticed, it is a model town, and may be held up as an example, not only to philanthropists and men of taste, but to speculators and men of business.

After leaving the Park, we ascended a hill, from the top of which we had a fine view of Liverpool and Birkenhead. Its sides were covered with villas, with little gardens about them. The architecture was generally less fantastic, and the style and materials of building more substantial than is usually employed in the same class of residences with us. Yet there was a good deal of the same *stuck up*, and uneasy pretentious air about them, that the suburban houses of our own city people so commonly have. Possibly this is the effect of association in my mind, of steady, reliable worth and friendship with plain or old fashioned dwellings, for I often find it difficult to discover in the buildings themselves, the elements of such expression. I am inclined to think it is more generally owing to some disunity in the design—often perhaps to a want of keeping between the mansion and its grounds or its situation. The architect and the gardener do not understand each other, and commonly the owner or resident is totally at variance in his tastes and intentions from both; or the man whose ideas the plan is made to serve, or who pays for it, has no true independent taste, but had fancies to be accommodated, which only follow confusedly after custom or fashion. It is a pity that every man's house cannot be really his own, and that he cannot make all that is true, beautiful, and good, in his own character, tastes, pursuits and history, manifest in it.

But however fanciful and uncomfortable many of the villa houses about Liverpool and Birkenhead appear at first sight, the substantial and thorough manner in which most of them are built, will atone for many faults. The friendship of nature has been secured to them. Dampness, heat, cold, will be welcome to do their best. Every day they will im-

cess, and the deepest public gratitude. Here nature may be viewed in her loveliest garb, the most obdurate heart may be softened, and the mind gently led to pursuits which refine, purify, and alleviate the humblest of the toil-worn."

* "Few towns, in modern times, have been built with such regard to sanitary regulations, as Birkenhead, and in no instance has so much been done for the health, comfort and enjoyment, of a people, as by those energetic individuals with whose names the rise and progress of Birkenhead are so intimately connected." *Dr. J. H. Robertson.*

prove. In fifty or a hundred years, fashions may change, and they will appear, perhaps, quaint, possibly grotesque—at any rate, picturesque—but still strong, homelike, and hospitable. They have no shingles to rot, no glued, and puttied, and painted gim-crackery, to warp and crack, and moulder, and can never look so shabby, and desolate, and dreary, as will nine-tenths of the buildings of the same denomination now erecting about New-York, almost as soon as they loose the raw, cheerless, impostor-like airs which seem almost inseparable from their newness. WAYFARER.

We are very much indebted to our correspondent for his clear and pleasing account of one of the most interesting public places of enjoyment in all Europe—and all the more interesting, because it has been formed by the people themselves, and not made and presented to them by the sovereign. We only regret that the people of our large cities, generally, cannot see, with their own eyes, the beauty, and realize the advantages of such parks in the midst of towns. New-York, for instance, now one of the largest cities in the world, has no public park, whatever—no breathing place, no grounds for the exercise and refreshment of her jaded citizens—for to call the little *yards* of land, covered with turf, and planted with trees, in various parts of the town, *parks*, is as much a misnomer as it would be to spread one's handkerhief down on the floor of the rotunda of the capitol, and call it a carpet.

The fact is, Americans generally, have no conception of the value, extent, or importance to the people of large cities, of public parks—and among the good results that will grow out of the World's Fair in London, will be that of showing thousands of them, Hyde Park, where the Crystal Palace stands—a building that covers twenty acres, and appears to take up as little room there, as if it were in an oak opening in Illinois.

We are glad to be able to say, *en passant*, that the government at Washington are manifesting a lively interest in this subject. The large tract of unimproved public lands lying south of the city of Washington—consisting of between one and two hundred acres, has just been taken in hand, at the desire of the President, with the view of making a NATIONAL PARK—something really worthy of the name. If his views can be fully carried out, that Park may exert an influence on the public taste of the whole country, as well as embellish and improve, in the highest degree, its seat of government. ED.

NOTES ON THE CULTURE OF MELONS IN THE NORTH.

BY C. SMITH, NEWPORT, N. Y

THE Melon is one of the greatest luxuries that can be grown in our climate,* provided we have it ready for the table during the warm season. But if it is not matured and ripened until the chilly days of September, it loses its delicious flavor, and will hardly pay for cultivation. Those who grow it, therefore, should bear in mind that the harvest must be made in August, and early in September, in order to realize either profit or pleasure. Of course, it is easy to start the plants soon enough, but how to remove them from the hot-bed to open culture, without stopping their growth from two to three weeks, is what I have not been able to accomplish. Even when the plants were growing on inverted sods, the same check in their growth would take place, although it would seem that the roots of the vines could not have been disturbed to the smallest extent. I know of no vegetable

* I write, of course, for the northern part of the Union—for all over the southern and south-western portions, melons are as plenty as blackberries.

so sensitive to the slightest injury in the process of transplanting, or change of location, as the melon.

To obviate this impediment, and yet to obtain the fruit at the season desired, I have adopted with success, the following method, which may, perhaps, prove interesting to those who attempt the melon culture anywhere north of New-York city.

About the 20th of April, and sooner, if the season will permit, I spread a generous dressing of well rotted manure, broadcast over the ground intended to grow the vines upon, and plow it under. Let the drag or cultivator follow the ploughing, until the soil is finely pulverised. The hills should not be less than seven feet apart. Procure two bushels of highway sand,* and place that quantity where each hill is to be grown. If this cannot be easily obtained, sand thrown upon the bank, and left there by running water, is equally appropriate, or sand dug out of the earth, two feet below the surface, is nicely adapted to the purpose. At any rate, find sand, and nothing but sand, to make the hills of, and if its energies were never taxed to grow any crop whatever, so much the better. Spread the soil thus supplied, over a surface of two feet in diameter. This will raise the hill five or six inches above the surrounding surface, which will favor the growth of the melon, though it might injure most other vegetables. Plant the seed half an inch deep. This will insure moisture sufficient for the purpose of germination; and if the seed of any vegetable whatever, be buried deeper than it need be, to secure that amount of humidity, the product will not be so abundant, nor will it be perfected as soon as it would, had it not had an unnatural obstacle to surmount and overcome. I should have said, that before depositing the seed, the sand referred to should be thoroughly incorporated with powdered charcoal, saturated with urine, and mixed with a fortieth part of its bulk of guano or fowl manure. This can easily be prepared six or eight weeks in advance of the time when it will be wanted. Sprinkle as much coal dust over the surface of the hill as will give it the dark color of charcoal, and then over the place where the seeds have been buried lay a pane of glass flat upon the ground. Now, if those seeds do not germinate in five or seven days, it will be because the sun does not show himself. Whenever the orb of day peeps out, the germinating process will proceed with all the rapidity that it would in a hot-bed under the most favorable condition.

Ususually, in a week, the glass must be raised to let the plants through, and placed on four bricks arranged about the vines, where they will do finely until about the middle of May, when the glass should be taken away, and a box two feet over and six inches deep, covered with coarse milinet or cheese binding must be put over each hill. This will prevent the evaporation of moisture, and keep the cold winds from the plants, and it is the only sure protection against the injuries usually inflicted by the striped bug. If the boxes are more than half a foot deep, they will shade the vines too much, and cause them to run up tall and slender, to their permanent injury. If the ground about the hill is kept black with coal powder, and the season prove favorable, the Citron Melon will be fully ripe in 112 days from planting; without the coal it will be two weeks later, and not quite up to standard in flavor. The coal dust keeps off that great enemy, the cut-worm. It is not offensive to the worm, but gets up such a degree of heat that it will turn away to avoid it. The boxes should not be removed until the vines begin to be cramped in their growth by them. The weeds may be kept down, and the soil stirred easily until the middle of June, by passing a cultivator between the rows. This process should be repeated often.

If the manure, or a part of it, is spread over the ground, instead of being all put in the

* Our correspondent proceeds on the supposition that the soil is a loamy one—if naturally very sandy, of course this is not needed. Ed.

hill, and the whole soil kept loose and mellow by faithful cultivation, the roots will extend to a great distance, much to the advantage of the fruit that sets latest, and to the amount of the crop. And this holds good not only with this vine, but all its congeners. The natural habit of the roots of this class of vegetable productions, is to reach far in all directions. This the cultivator should assist and encourage; if he does not he will interfere with his own reward for his industry. Let the bulk of his manure be spread over the whole ground, and then place sufficient in a hill so that the vegetable body may never one moment of its existence fail to expand itself for want of nourishment. If a plant, in the early stages of its life, wants for a few days only, its proper sustenance, it will never fully recover from the effects of the misfortune. A want of nutrition, also, at the time the fruit begins to form and mature, is still more destructive, and that fertilizer which was spread broadcast over the soil, now comes to the rescue and ensures success.

The labor we have referred to, may appear large to be bestowed on one item of the garden; perhaps it is so. Yet it will abundantly repay every step taken, and every finger lifted. Six weeks of melons in abundance, for ourselves and friends, is worth twice the efforts needed for their production.

I think it was nine years since, that I began to experiment with the Yellow Flesh Melon, with a view to improve its size. I began with specimens weighing six or seven pounds, and ended the last season with a crop averaging between twenty and thirty pounds. I would leave but one fruit on a vine, which would become large. From the seeds of this improved specimen, I would plant the next year, and this operation repeat every season. The gain was gradual for several years, and then became more rapid. The last year the improvement in size was greatest. The melons were grown in open culture, planted about the 20th May. The flavor of this melon has not deteriorated, nor can I perceive in that matter, any change. For productiveness and easy cultivation, I know of nothing better than the Christiana. For excellence of flavor, the Citron has no superior. If there is a better water-melon than the Black Spanish, I have not been able to find it.

SUCCESSFUL CURCULIO PRACTICE.

BY O., OWEGO, N. Y.

Mr. Downing—Dear Sir: I send you an account of the method I have successfully practiced during eight years, in protecting my plums from the depredations of the curculio.

I will first mention some facts relative to the habits and natural history of that destructive insect, the knowledge of which I acquired, part by observation, and partly by reading an article on insects from the pen of the lamented Willis Gaylord.

Generally, as soon as the plum has attained the size of a full grown currant, the curculio ascends [or flies to, Ed.] the tree, and, making a semilunar puncture in the plum, deposits an egg in it; commonly only one egg is deposited in a plum, but sometimes two eggs are found in the same plum. These eggs become larvæ or grubs, that feed on the pulp of the plum, which finally causes the plum to fall to the ground before it is ripe. After the maggot or larvæ, as the embryo insect is frequently called, attains a sufficient size, it crawls out of the plum, goes into the earth, stays there about twenty-one days, and comes out a perfect insect. These new insects ascend the tree, either by climbing or flying, puncture the plums and deposit their eggs. These eggs become larvæ, feed on the pulp

of the plums until they fall to the ground, and, when they have attained the proper size, they crawl out of the plum, go into the earth, stay there their allotted time, twenty-one days, become perfect insects, come out of the earth, ascend the trees and perform the same destructive operations that their predecessors did. Thus we perceived that several generations of that most destructive pest, to stone fruits generally, are produced in one season.

Reflecting on these facts, I concluded that if we would destroy the insects in their embryo state, we should preserve our stone fruits from their depredations. I made the experiment; and its success exceeded my most sanguine expectation; for, instead of from half a dozen to a dozen ripe plums, my usual annual crop from one tree, I had three measured (not estimated,) bushels, and I had that amount annually from one tree, until it was destroyed by the disastrous fire that laid waste our village in the autumn of 1849.

Early in the spring I remove all grass and weeds from the vicinity of the trees; I then level and smooth the surface of the ground around the trees, and make it as hard as I can, by beating it with the surface of a spade or hoe. It is then prepared for being easily swept with a common broom. As soon as the young plums attain the size of a full grown currant, I shake the trees with some violence early in the morning,—*early* because the curculio is somewhat torpid then in consequence of the coldness of the night, and it is therefore more easily detached from the tree; I then collect, by sweeping, everything that falls from the tree, whether insects or plums, and commit the sweepings to the flames or throw them into boiling water, and by that means destroy both the insects and their embryos. If the punctured plums are thrown into cold water, the insects are hatched, about as readily, as if they were suffered to lie on the ground, as I have witnessed in several instances. It is necessary to continue this shaking and sweeping and burning daily, until the plums are ripe. When the ground around the trees is properly prepared for sweeping, as above mentioned, it requires less than five minutes each day to shake three trees, sweep, and commit to the flames the collected sweepings. The time was measured, not estimated. If the ground around the trees is closely covered with flat stones, bricks or boards, the fruit is effectually protected from destruction by the curculio, unless that pest is suffered to breed in the vicinity. The punctured plums should not be permitted to lie long on the ground, lest the embryo insect should crawl out and go into the earth. The above statements can be relied on; they are facts deduced from actual practice. I think we may justly conclude from them, that a proper concert of action, on the part of the owners of stone fruit trees, would effectually preserve our plums from the devastations of the curculio.

The curculio sometimes feeds on ripe plums, but more commonly, I believe, on the succulent and tender extremity of the branches near the terminal bud. It frequently bites off the terminal bud of the leading shoot. After it has fed, it conceals itself on the under surface of a leaf, where it usually spends the day, unless the day is cloudy and dark. I believe it moves about more during the night than during the day. I do not know what becomes of it on the approach of cold weather. I think it hybernates in the earth. I have seen it go into the crevices of the ground.

I have made some efforts to discover the insect that causes the excrescences which destroy so many plum and cherry trees, but, thus far, my efforts have been unavailing. I have tried to hatch the larvæ in the house, but soon after the limbs, containing the excrescences, were severed from the tree, the larvæ died. On examining these excrescences in a green state, I found the texture of the saw-wood converted from a fibrous into a granular state. When the excrescences become numerous on the limbs, the circulating fluid seems to be so vitiated that it does not afford its wonted nutriment to the tree, or, what, perhaps,

is more likely, after the nutriment has been elaborated by the appropriate organs, the fibrous texture is destroyed to such a degree that the elaborated nutriment can not be carried through the proper vessels to its destined places, and the tree therefore dies. The excrescence insect seems to prefer the morello cherry tree to any other tree. I have seen that tree, standing among young and vigorous plum trees, destroyed, while the plum trees remained untouched.

I have been acquainted with the wild plum tree for nearly half of a century, and I do not remember to have seen an excrescence on any of them. The curculio generally destroys its fruit. A gall insect often preys on the wild plum and wild cherry also, converting both the plum and the cherry into large, irregular bladder-like masses. The wild plŭm tree does not grow so fast as the cultivated plum tree, but is much longer lived. I have seen them more than a foot in diameter in this vicinity, and I think three quarters of a century old. The cultivated plum, inocculated or ingrafted into the wild stock, grows well. I recently measured a thorn tree in this vicinity, sixteen inches in diameter. The apple tree ingrafted into the thorn, grows well here. Respectfully yours. O.

Owego, N. Y., March, 1851.

THE MANAGEMENT OF GREEN-HOUSE PLANTS AT THE SOUTH.

BY JAMES STEWART, MEMPHIS, TENN.

To be a thorough *good plant-grower* requires no mean competency, and an amount of practice by no means insignificant. But to be such in the southern states, is almost saying you have reached perfection in the art. Doubtless this will appear singular, and will be strongly questioned by those who are accustomed to the climate of England, or other parts of Europe, and who imagine they have a deal more to contend with, than it is possible to have in such a favorable climate as that of America. These, as well as perhaps some plant owners, are apt to suppose that good practical "plantsmen" are not yet among us, to take the matter in hand. But that is not the case, as we have as competent men in that department as any country can produce; and nothing more or less than the scorching heat of American tropical summers, which is so overpowering in its effects of parching the leaves and drying their substance, weakening and exhausting others, and even dissolving some of a certain class, and notwithstanding the efforts and energies of the gardener, he will be even threatened, in some instances, with the entire loss of his stock. Large plants that are of any age, seem as though they were more exposed, and in all cases are the greatest sufferers. Small and young stock will always survive best, and consequently we have always, with such, to be pretty well supplied; we water largely, and syringe freely, but this is in an hour wasted and consumed by a burning atmosphere. Again, the variations of seasons such, as extremes of wet or dry, or sudden interchanges of both, defy all rules. To be a plantsman here, you must be directed by nature's laws, paying the closest attention to the great excesses of temperature which belong to a climate partly temperate and partly tropical.

The winter division here, that is after the heat of summer declines, and before it regains its power in the spring, is to a certainty, of all the climes I have practiced in, the most favorable. We may pot, repot, reduce balls of earth, shake them to pieces, or whatever else necessity and proper management directs. Nature assists at this season, and every thing prospers well and grows luxuriantly. A charming sight certainly, is a well kept and well

managed green-house, all throughout this season. Next comes the summer division, the season of extreme heat, with strange contrast in its effects. The rich gum of your soft wooded plants will, if plants are exposed as they would be in England, change into a sickly yellow appearance, which will soon deprive them of nearly all their foliage, leaving the whole in such a feeble condition as to be hard for them to exist. Then is the time the gardener enters upon his difficulties. Then is the time that the unacclimated practitioner and the unskilful amateur will be confounded. They naturally suppose that something must be done to bring them back to their usual condition, and to stay them from getting any worse; putting in fresh soil, and a little cutting to excite them into fresh growth, is resorted to, but instead of getting better they get worse, and many of them die. Perhaps soil and situation are supposed to have been unsuitable, and all is again changed, but they will gradually drop off till probably all perish. Such is the result of applying common practice to green-house plants in the south. Your *hard-wooded* plants, and all that are not the growth of a few months, will not be effected so visibly, and you may venture to repot such in the event of additional room being required. But it should be law among the plant growers in the southern United States, not to destroy root or branch during this season, for just as sure as they do so, certainly they will loose their plants. They may look shriveled, yellow, or leafless, but be glad if you can save the wood, and to do this you must be strictly careful that everything stand in the shade—a place in the shade of trees but *not under* them will do very well—but the north side of a building is much better. The most delicate ought to be protectible from the destructive rain-storms. The summer site being chosen and the plants placed in it, they must be kept moist by watering them twice a day—morning and evening. Do not become uneasy and think, because they are looking tolerably well, that a *repotting* or some other process, would assist them. If you do so, the chance is ten to one that you will make the worst of a good job. As the season grows cooler, they will show signs of commencing to grow, but even then do not be in a hurry; let all dangers and hazards of the hot season be over, before you prepare for winter and its entirely altered condition.

As to the various plants that are sown throughout summer for winter bloom, such as the Chinese Primrose, Mignonette, and other annuals, in four seasons out of five, you fail to bloom them here before February, because you cannot get a sowing to stand before late in September or October, but to overcome the difficulty, I sow as late in spring as possible, and let them remain in the seed pot, in the shade, with all the rest, till the growing season commences at the south, and the gardener must be wide awake to get his plants ready for it. There is something to do and to be done, as well after the heat of the season has so far declined as to allow the plants, which are still in their shaded situation, to commence their growth; let them be fairly started to prove that the season of rest is complete and the season of growth has begun. Then is the proper time to commence potting. A great part of the collection will want their balls examined and divested of nearly all the soil in which they grew last year; others must be reduced to suit the condition of their roots.

I wish here to make a few remarks on soil, drainage, and watering, as they form part of the general system of culture. Compost, according to nearly all writings and practitioners, must be of as many kinds and natures as you have genera in your collection, and many pages, and much time, are spent in collecting and mixing them. In all this routine I was educated; I have, perhaps, seen as systematic a practice as any body, but experience has taught me that all such detail respecting compost, is unnecessary. A theorist may suppose, and may state, that each variety of plant must have a different soil, or mixture of soils, and quite natural it may appear to be; but I have satisfied myself it is but

theory. Some years ago I came to the conclusion, that practically, we need only two soils, loam and peat; the former I use free from any mixture whatever, for all the general assortment of plants, excepting such as camellias, to which I add half the latter, and to *hair-rooted plants*, (heaths, &c.) I use the latter. To the cactus tribe, I use, with the former, a little lime-rubbish or sand. I never use manure under any circumstances, in the compost. The soil I obtain from where I can get it most convenient and suitable, although I decidedly prefer and recommend soil to be collected with all the rough herbage, bones, &c., and to be piled up to lie *undisturbed* at least two years. I find sods from an old pasture give the best loam, and when well decomposed they are rich in vegetable matter.

Next comes draining, a subject which occupies more room in horticultural pages, and has been so long and universally practiced, that it is the height of boldness to assail its value. But let me invite the gardener at the south to stop and look into it, and ask if such is really necessary, and for what reason. "Why certainly, it is," he will reply; "every article you read, and every gardener you meet, declares it needful, to prevent the plants being flowed with superfluous water." My answer is, that if a gardener does not know such a small portion of soil, of elevated, movable soil, as is contained in a flower-pot, without a drain, or how and when to water a plant, without surcharging and saturating it, it will be, by all means, advisable for him to employ a drain; but for a man who really is competent in the plant department, I contend a drain of some two or three inches of broken pieces in the bottom of the pot, is, in a dry climate, worse than useless. The pots are ready and clean, inside and out, and a heap of soil is collected free from any foreign mixture. This I use in as rough a state, (without sifting,) as the size of the pot may allow. I make the soil compact in potting, by beating the bottom of the pot on the poting bench. Never by pressing with stick and fingers. The bad effects of the latter are *unseen* and unknown to the inexperienced, but bad effects they often are. After potting, place the plants in the situation you have for each species. If such situation be at all adapted, they will soon show a rich appearance of sound, healthy growth, though they are always to be found in different stages; some more delicate, and not fit to feed on anything but the *pure soil*, others growing quite robust, and therefore ready to use *something stronger*. In the latter case, I commence manure watering, by the use of guano, a strong solution of which I keep mixed up in a tub, and as I pass with the water pots, I add half a pint or half a gallon, or in other words, make it strong enough to suit the condition of the plants, and so on continue all the growing season, with additional pot room, and more and stronger liquid feeding. This, however, must be gradually withdrawn as the hot season approaches. When the growth ceases, the plants can no longer digest liquid manure, and suffer by it.

JAMES STEWART.

Memphis, Tennessee.

A WORD OR TWO MORE ON LAWNS.

BY A. B. ALLEN, NEW-YORK

DEAR SIR—I agree with you fully in your preference of blue grass and white clover for a lawn; they undoubtedly make the finest and softest turf of any of the grasses grown in the United States. But allow me to add to your excellent observations on the prepation of the ground before sowing, that blue grass and white clover delight in a calcarious soil. If lime then does not already exist in the soil, it should be added in doses of at least

50 bushels per acre, once in three to five years, till 300 bushels per acre is thoroughly well incorporated in the soil. In addition to the lime, it would be well to sow two bushels of plaster of Paris on each acre early every spring. Plaster is the direct food of the clover family, and is beneficial also to blue grass.

Another grass is getting to be in great repute in this vicinity for lawns, and this is the English perennial *ray* grass—not *rye* grass—that is quite an inferior kind of grass, and it is not perennial.

After preparing the lawn as recommended by you, sow at the rate of three bushels per acre; mix no other seed whatever with it, otherwise it will be likely to come up in tufts. August and March are the best months in this climate to sow ray grass. It has been cultivated for several years as far north as Connecticut, and south as far as the lower part of North Carolina; and when properly sown and cared for, it has given entire satisfaction, even as a *field* crop. It is in high repute for grazing, and yields almost as great an annual burthen as orchard grass. It has rather a coarse stalk and is of a rank growth; but when this comes to be cut often and close, in the manner of lawns, the grass grows finer and very thick; and forms the most elastic and velvety turf I have ever trod in the United States. It is about ten years since ray grass was first introduced into this neighborhood.

One more word about the treatment of lawns in our hot climate, and I have done. It is best to mow them in the afternoon, and just before a shower if possible, [but a *lawn* cannot be closely mown except when there is some moisture on the grass. Ed.] Irrigate, if you have water, for several evenings after mowing, if the weather be dry. If you cannot irrigate, then scratch the whole surface with a fine tooth harrow, or iron rake, spread a light dressing of swamp muck or compost upon it, and always roll hard with an iron roller the morning after mowing.

A. B. Allen.

New-York, April 9, 1851.

SEASONABLE HINTS.

BY AN OLD DIGGER.

If you wish to raise the earliest vegetables, or get the best growth possible in any annual plant, be sure to use well rotted manure. The chemists may say what they please about the loss of ammonia and the gases, and what they say about the actual waste in letting manure rot before using it, is true enough, doubtless. But setting that aside, practice has told me, time and again, that I can get a crop of peas four or five days earlier than my neighbors, in the same soil, by using manure a year old, and *quite fine*, when they use it almost as fresh as when it first comes from the stable. The fact is, fresh manure is like corned beef and cabbage—very hearty food, but requiring a strong stomach. Annuals of moderate growth, like something easier of digestion. As all old gardeners know this by constant trial, you can no more beat the value of rotted manure out of their heads, than you can make an elder bush bear white berries, by scolding it.

It is quite wonderful what a passion some men have for what *they* call *pruning* trees, and what I call murdering them by inches. Only put a knife or saw into their hands, and a tree before them, and you will see that it is only because they were not born Caliphs of Bagdad, that their neighbors have any heads left on their shoulders. Gardeners from the "auld countrie"—especially all such as have served their time behind a wheel-barrow,

are mighty fond of this sort of thing. One of these "gintlemen" was lopping off and utterly despoiling the natural ways of a fine linden tree lately. When he was cross-questioned a little as to what he was about, ruining the tree in that manner, he replied—"Bless yer sowl—I'm only a littin the *hair* intil it!" But in fact, many a better gardener than this Paddy—many a man who has done as good things in the gardening way in Great Britain, as can be done any where in the world, is placed in the same awkward fix when he comes into a country with a dry, hot climate, like the United States. All his life-long has he been busy learning how to "let the air in" to the top, and keep the wet away from the roots, till it is a second nature to him, and he finds it almost as impossible to adopt just the contrary practice when he gets to America, as it is for a Polar bear to lay aside his long, white furry coat, and walk about like a tropical gentlemen in his natural nankeen pantaloons and waistcoat. He cuts away at his trees to let in the sun, and raises up his flower beds to drain off the wet, when it is just the very sun and drouth that we have too much of. No man can be a good gardener who will not listen to reason, and in a country where nature evidently meant leaves for umbrellas, take care how you snap your fingers at her, by pruning without mercy, and "*littin the hair in.*"

If you find some of your transplanted trees flagging, and looking as if they were going to say good bye to you, don't imagine you can save them by pouring manure water about their roots. You might as well give a man nearly dead with debility and starvation, as much plum pudding as he could make a hearty meal of. The best thing you can do is, first to reduce the top a little more, (or a good deal more if needful)—for the difficulty most probably is, that we have more top to exhaust than root to supply. Then loosen the soil, and water it if dry, and lastly, *mulch* the ground as far as the roots extend. This you may do by covering it with three or four inches of straw, litter, tan-bark, or something of that sort, to keep the roots cool and moist—so as to coax them into new growth. Watering a transplanted tree every day, and letting the surface dry hard with the sun and wind, is too much like basting a joint of meat before the kitchen fire, to be looked upon as decent treatment for anything living. If your tree is something rare and curious, that you are afraid will die, and would not loose for the world, and yet that wont start out in spite of all your wishes, syringe the bark once every night after sun-set. This will freshen it, and make the dormant buds shoot out.

If you find any of your fruit trees barren, from too great running to wood, about the first of June is the time to shorten back the long shoots, and clip or pinch off the ends of the side shoots, so as to force the tree to expend its substance in making fruit buds, instead of wasting every bit of sap in overgrowth.

Make war upon insects all this month, and especially at the end of it, as if it were the chief duty of man to destroy them—(there is no doubt about its being the chief duty of the gardener.) Tobacco water is your main weapon, and with a syringe or a hand engine, you can, if you take them in time, carry such slaughter into the enemy's camp as would alarm the peace society, if there is one among these creeping things. Slugs on rose bushes, or the green fly on plants, will make their appearance by thousands and tens of thousands, as the weather gets hot, and the nights summery. The time to open your light artillery upon the "inemy," is very early in the morning, or just after sun-down, the latter the better time—by all odds. Find out whether they "roost" on the under or upper side of the leaves, or nibble away at the tender points of the shoots, and shower them to the tune of "Old Virginny," i. e., strong tobacco water. If your plant is of a delicate substance, mind, however, that you don't give *it* a fainting fit, as well as the vermin. Always make the tobacco water by mixing some rain water with it, for such plants, and

if you have had no experience in the matter, dilute and use some on a single plant before you undertake your whole border. After half a day you can tell how it works, and act accordingly. What you want is just strength enough to kill the insect, and not enough to injure the young leaves. Yours, AN OLD DIGGER.

ON THE IMPORTANCE OF MULCHING.

BY A PRACTICAL MULCHER, DEDHAM, MASS.

THOUGH the subject we have placed at the head of this communication, has received some attention from scientific cultivators in certain parts of the country, and allusions to its use and importance have been made in "the Horticulturist," whose different volumes form our best standard book of reference, yet it must be confessed that a thorough treatise upon the subject is a very great desideratum, especially in *this land* of clear skies, arid atmosphere, burning suns, and summer drouths.

There are certain departments of horticulture, and certain processes and operations of the gardener's noble and beautiful art, that either have been overlooked and neglected in this country, or that have not yet had their time and opportunity for development. One is the "Hybernation of Plants;" another "the Proper Feeding of Trees;" another "the Value, Beauty and Cultivation of Evergreens;" and last but not least, "the Benefit of Mulching," to trees, plants, seeds, &c. In some future communication, Mr. Editor, I purpose to give you the results of my observation, experience and reflection upon the former themes, should you allow me, while I confine my remarks, for the present, to the subject of "mulching." In England and on the continent of Europe, this matter is receiving something of the attention it deserves, and yet, if the process has its value on the sea-girt isle of mists and fogs, where old Sol himself shines hardly brighter than our harvest moon, of what vastly greater importance must it be in this climate, where annual and long continued drouths seem a part of the order of nature, and where the hygrometer indicates a greater deficiency of moisture than is known in any European atmosphere. Indeed, I regard *mulching* as *our* prime and especial necessity,—*the* must indispensible thing in North American Horticulture. For in the first place, the operation of mulching,—or covering over the surface of the ground—prevents the evaporation of the moisture that is so requisite to the rooting of new plantations, to the development of luxuriant foliage, and the production of perfect flowers, and fair, juicy large sized fruits. Again: the operation of mulching not only prevents, to a great extent, the escape of moisture, but also, and what is of greater importance, the passing away from the earth of the volatile gases that are held in solution in the water, and which, sucked in by the minute mouths of the radicles or spongioles, give nourishment to the plant or tree.

That mulching is of great value in the case of *young* and *newly planted trees*, by preventing the process of evaporation, is universally admitted in theory, and to a certain extent carried out into practice; and yet, but few seem to be aware of its value in retaining the nourishment as well as the moisture in the earth, and thus, by both these means, contributing to the luxuriant and heathful condition of *plants and trees already rooted, and well established in the soil.* But observation, however, as well as actual experience, has fully convinced me, that trees will not only put forth more luxuriantly, and grow more vigorously, but that *the fruit* will *be far larger, fairer, and juicer*, for mulching during the hot season. And I hazard the observation, that in the culture of pears, and

certain kinds of apples,—such as the Roxbury russet, that are generally small and knerly on a gravelly bottom, careful mulching is *almost* equal to a clay subsoil.

And here let me say, by way of parenthesis, that in the cultivation of these fruits, it is not, I think, any nutritive element in the clay soil, but only its power of retaining moisture, that gives it the advantage over a gravelly substratum. By *carefully mulching*, however, I do not mean a wisp of straw, hay, weeds, or small brush, nor a shovel of spent tan, hub-chips or saw-dust, placed just round the *trunk* of the tree, but *a covering of the ground, if possible, as far as the roots extend.* There are some absurd people, who seem to think, if we are to judge them by their practice, that somewhere at the butt of the tree is a great mouth, in which the tree takes in its food and drink; and, accordingly, they put all the nourishment, whether liquid or solid, "right round" the trunk. Whereas the truth is, the numerous little mouths that drink in the moisture, and the nutritious elements that are disolved in it, are in the little spongioles that form the very terminations of the radical branches; and our course of treatment should be based upon this fact, in watering, manuring, and mulching.

Mulching then, in the *first* place, prevents, in light gravelly soils—and in dry seasons in all soils—the *evaporation of the moisture* necessary to that flow of sap, that shall make a *luxuriant growth, fine foliage* and *fair, large juicy fruit.*

And secondly, as the elements that nourish the tree are contained in the moisture in solution, and a dry state of the earth must thus cut off the supply of food, mulching actually *nourishes the tree.* In proof of this, I might, would my space allow, adduce numerous facts; but experiments are so easily tried, that such evidence is hardly necessary here.

In conclusion, as the season for planting flowers, roots, seeds, &c., is at hand, I must say one word in favor of mulching for them.

Mulch your dahlias,—if you want free, rapid, vigorous growth, and full abundant bloom. Much the best substance or *mulch* for this purpose, is the soft spongy *meadow moss,* though leaves and coarse sedgy meadow hay will do. I have planted two rows of dahlias side by side, trenched them alike—twenty inches deep—manured them alike, and the row that was kept carefully mulched outgrew and outbloomed the other, and put it altogether to shame.

Mulch your flower seeds—"and what do you mean by that?" I mean that flower seeds fail to come up, either from a deficiency or a superabundance of moisture, both of which extremes are obviated by this process.

When you plant your seeds, cover them over with the same spongy moss spoken of above. And, that I may be perfectly understood, here is my recipe for planting flower seeds: Make the earth very fine with a garden knife or common case knife. Scatter your seeds, if small, over the place thus prepared,—if large, bury them a little; press the earth upon them; spread your damp moss, and clap a flower pot or pan over them. When your seeds have started, lift up the pot a little by putting a stick or stone under the south side, and as soon as your seedlings look green and strong, take away the moss, keeping the pot or pan handy against a late frost or chilling wind. In this way, you will rarely have to complain of your seedsman; and you may have early plants and the most delicate kinds without a hot-bed. My friends are putting the continual query, "How do you make all your seeds come up and grow?" This is my secret, and in Prof. LINDLEY'S book you will find it more in detail. Let me say in conclusion: mulch *new plantations* if you wish your trees to live and grow. Mulch your *young trees* if you want them thrifty and luxuriant. Mulch your *old trees* if you desire fine foliage and fair large fruit.

Imitate nature in the fields and forests, who gathers a bed of leaves and moss about the roots of her trees, and follow the advice of AN OLD MULCHER.

Literary Notices.

THE FLOWER GARDEN, *or Breck's Book of Flowers; in which are described all the various hardy Herbaceous Perennials, Annuals, Shrubby Plants, Evergreens, &c., with Directions for their Cultivation.* By JOSEPH BRECK. Boston: published by Jewett & Co.—(1 vol. 336 p. 12 mo.)

[THE following notice of Mr. BRECK'S volume on Flower Gardening, lately published, was received too late for our last number. The volume itself, which we have just seen, and have not yet fully examined, appears to be a very useful and practical hand-book for the amateur in ornamental gardening. ED.]

"BRECK'S BOOK OF FLOWERS," *with hints on Flower-Beds and Flower-Borders.*—Here is a new book,—for which we desire our thanks to the author,—on the delightful subject of horticulture and flowers.

The brightest, the fairest, the sweetest, the loveliest members of the vegetable kingdom,—and, save fair maidens and innocent childhood, the loveliest things in the universe, are flowers. They have been well called "The Lyric Poetry of Creation." HORACE SMITH, the author of that grand poem, "Moral Ruins," and to my mind, one of the chiefest English poets, in his charming "Hymn to the Flowers," calls them "day stars," "matin worshippers," "living preachers," "floral apostles," "ephemeral sages," and concludes with the enthusiastic declaration—

"Were I, O God! in churchless lands remaining,
Far from all teachers, and from all divines,
My soul would find in flowers of thy ordaining,
Priests, sermons, shrines!"

Poets of all times have sung of flowers; and MARY HOWITT'S pious interpretation of their mission and teaching, how often soever quoted, never loses its charm to our ears, especially the lines—

"Our outward life requires them not;
Then wherefore had they birth?
To minister delight to man,
To beautify the earth;
To comfort man—to whisper hope,
Whene'er his faith is dim,
For he that careth for the flowers,
Will much more car fore him."

Truly, our heavenly Father and the blessed angels,—with all reverence be it said, must be lovers of flowers; for they are scattered by the divine bounty, with lavish hand, over field and meadow, on mountain and in valley. They nod to us from the tall trees, they open their starry eyes by the side of the dancing, musical streamlet, and smile serenely on us from the bosom of the placid lake. They are the acme and perfection of natural beauty. They give the finishing touch to nature. They refine and complete the beauty of earth's brightest, fairest scenes. They are to rocks and fields, woods and trees, what the flushing cheek, the ruddy lip, the radiant flashing eye, are to a lovely woman or a handsome man. And flowers, like human beings, grow more resplendently beautiful, more

exquisitely fair and perfect, by continual culture. Indeed, the finest, choicest flowers are the very result of civilization, cultivation, and refinement, and preach a continual lesson to our race, of the wonderful and transforming influence of a fine culture and perfect training. The Rose, with form of beauty and soul of perfume,—the brilliant and long illustrious Tulip,—that lively, sparkling little pet, the Verbena, and the stately, gorgeous Dahlia, are all creations of civilization and high culture. What a change, from the straggling bramble, with insignificant blossoms, to the protean queen of flowers,—with full blooms of every various tint and fragrant odor; or from the coarse and single Mexican flower, with its scanty petals of dull purple, to the splendid, full, round, quilled, cupped Dahlia, with every variety of shading, streaking, and tinting and coloring—*except blue*. And I should take delight in the Dahlia for this, if for no other reason, that it is a glowing and exquisite history, as well as a persuasive exhortation of the importance and value of high, true culture. And we should be thankful for any work that treats lucidly on the subject of flowers,—and especially for a writer, that without any pretence of mere technical science, makes an intelligible, practical book—like the one before us—for popular use, that can aid us in the pursuit of this most elevating and refining art—by selecting for us a good assortment of shrubbery, as well as of annuals and perennials, explaining simply their habits and wants, and showing us how to cultivate them. And here, a word or two now, at the opening of the season, may not be amiss on the subject of—

Flower Beds and Flower Borders.—In all cases, where possible, I prefer borders to beds; it is so difficult to relieve the latter from an air of stiffness, primness and artificiality, that reminds one of the old fashioned, Frenchified, geometric school of gardening. Again: the paths and avenues on which the boders touch, should never be straight or angular. In the early days of science it was said, that nature abhorred a vacuum; but it is always true, that nature abhors straight lines and angles, and delights in curves; and so does the lover of the beautiful, and every horticulturist of true taste. See to it, then, if you would "gratify both soul and sense," that you make your avenues and walks and paths, curvilinear. A flower border is most beautiful when stealing out and sloping down to the avenue, from luxriant groups of trees and shrubbery, that are verdant down to the very ground. If these are wanting, low evergreens, or a deep green hedge, or at any rate, a *back ground* of verdure—with the tall flowers set off against it, has a most beautiful and charming effect. These tall flowers at the back of the borders should be Yuccas, Spireas, as, Lobelia fulgens, Campanulas in variety, Foxgloves, Gladiolii, Bee Larkspur, L. sinensis, Hollyhocks, and all such plants as send up tall and brilliant spikes of flowers, from a pyramid of leaves against the back ground of shrubbery. Mingling in with these, there should be light frames for the best climbers, such as the Calystegia pubescens, Lobb's pretty new Nasturtium, pink, white, and purple, Maurandias, Eternal and Sweet Peas, Thunbergias, Cypress Vine, and Canary Bird flower, (Tropœolum peregrinum.) Then should come the flowers of middle height and bright colors,—and these should gradually slope off into masses of Petunias, Portulaccas, Verbenas, Convolvulus minor, Calystegias, Scarlet Geraniums, &c., &c. Indeed, a temporary or late flower garden, can be rapidly improved with nothing but Fever-fews, Scarlet Geraniums, Petunias and Verbenas, by properly arranging and grouping the colors—and marking the distances with a bunch of Gladiolii or Roses. *Beds* of Roses, Verbenas and Mignonette, with a climber or Dahlia, if you please, in the center, in a round, oval or curvilinear figure, are admissible, cut out of the turf and embroidered upon a lawn. Pœonias and Dahlias should not, I think, be in a border, but should set alone among shrubbery, between evergreens, &c. One word on *grouping* according to forms and colors, as well as heights, and I have done.

The care to bring complementary colors together, has sometimes a fine effect—as in case of vivid orange-scarlet, and azure blue—the scarlet of Smith's Geranium, Scarlet Lychnis, or Defiance Verbena, with the blue of Salvia patens, Camellia Celestis, and the blue Nemophila. White and scarlet, orange with purple, yellow with blue, pink with white or deep purple, look well. Next your Scarlet Geraniums place a knot of Camellias, or pin down a blue Salvia. In another place, or on the other side of the Geranium, set double white Feverfews. Place a mass of blue Nemophila or of white Verbenas, beside Ransom's Defiance, (I am talking of Verbenas)—put Eclipse, Brill's Rosy or Beauty Supreme, with Frost's purple. St. Margaret with Othello, or the common purple Verbena. Star masses of new blue Convolvulus; next Escholtzia, (Chryse's,) and masses of Calystegia, set with masses of the new Plumbago larpentæ. Flowers should also be grouped in the borders according to their forms. Double white Feverfews, and purple Senecias, together. Malope, purple and white Lavateras, and African (annual) Hibiscus, together. Scarlet and orange colored Cacalia, Mexican Ageratum and white Eupatorium, in a group. It is *everything* to a flower garden, to arrange and *group* flowers according to heights, forms and colors, so that in place of the chaotic, hap-hazard, higgledy-piggledy style so common, the order, grace, and beauty of true divine ART, should rule and harmonise all things in it.

Dedham, Mass., March 17.

Domestic Notices.

FRONTISPIECE—RURAL CHURCH.—Pursuing our intention of occasionally presenting sketches and hints for the improvement of our county church architecture, we give, this month, a view from an English Journal, of the new district church at Bracknell. We think no one can become familiar with the forms and outlines of the Gothic style as applied to church architecture, even in this comparatively simple manner, without being impressed with its superiority, both in point of significance and beauty, over the Grecian structures, still so commonly built for churches in many parts of the country.

HARDY TREES.—It is interesting to note the hardiness of various trees or shrubs not yet well known in the country. Though the past winter has not been a cold one in the northern states, yet the alternation of heat and cold have been so frequent as to affect many half hardy plants quite as much as a much lower state of the atmosphere usually does.

Cryptomeria japonica and *Taxodium sempervirens*, two new evergreens which were expected to prove decided acquisitions to our pleasure ground, do not, we are sorry to find, after two years trial, prove to be really hardy. The young shoots of the latter have either been quite killed by the frost—even when the plants have been covered; while the former, though not absolutely killed, becomes so browned and enfeebled that it can never be looked upon as a hardy tree north of Philadelphia. In the climate of Baltimore and southward, we have no doubt that both these trees will prove quite hardy.

Pinus excelsa, abies Smithiana, Picea cephalonica, Thuya filiformis, prove perfectly hardy in all exposures. The Deodar cedar, we are glad to mention, is quite hardy, and flourishes admirably in this climate, and will soon be extensively planted as one of the most beautiful of evergreens. We have still some doubts about the hardiness of the *Araucaria* or Chili pine. It certainly stands the winter—but still it seems enfeebled by it. This tree seems to demand a soil composed of three-fourths *sand* as a necessity. In rich, damp, loamy soils it neither grows nor bears the winters—even about Philadelphia—while in a somewhat shaded position and in very sandy soil, it thrives as far north as the Hudson Highlands. Whether it will take to our climate as it does to that of England—where it is certainly the most striking

of all evergreen trees—remains yet to be proved.

One of the handsomest of all the new evergreens, is the new Yew-like tree from Florida—*Torreya taxifolia*. Its rich, dark green foliage, its extremely elegant habit and rapid growth, recommend it particularly to amateurs. It has borne the past three winters about New-York and in this neighborhood quite without protection.

Rhododendron catawbiense and its many beautiful varieties, sent out here from English nurseries, prove much better adapted to hardy culture than even the *R. maximum* of our native woods. They should find a place in every good garden—and should be planted in a deep shady border composed of sand and leaf mould.

Wiegela rosea, Spirea prunifolia pleno, Buddlea, Lindleyana and *Forsythia viridissima*—three of the finest new deciduous shrubs lately introduced, prove perfectly hardy in all situations. The evergreen *Euonymus* and its two varieties with gold and silver striped foliage, are quite hardy about New-York, and seem particularly well suited for town gardens, where verdure in shrubs during winter is desirable.

The Camellia, hardy at Baltimore.—Passing through Baltimore a few days since, we made a hasty visit to the country-seat of Dr. Edmundson, a mile from the city, to see Camellias growing and blooming in the open air, (see Hort. vol. iii. p. 417.) The sight was one well worth seeing. In the rear of Dr. E.'s house are fine groups of oak trees, standing in the lawn. Under the partial shelter of these trees, we saw three large clumps or beds of Camellias, containing, perhaps, a couple of hundred plants. They were growing in a dry, light, gravelly loam, where they have now flourished for some five or six years, and have grown to various heights, from 2 to 6 feet. They receive no protection whatever, in winter, except a covering of three or four inches of the oak leaves thrown over the surface of the soil in autumn, to keep the severe frosts from the roots. The plants were in fine condition, and when we saw them, (April 17,) they were nearly in full bloom—at the same time with the fruit trees in the surrounding orchards, and apparently almost as hardy.

This will very much surprise those who look upon the Camellia as a tender green-house plant—but not those who are familliar with the fact, that in that part of China where the Camellia grows naturally, the rivers are occasionsionally frozen.

Dr. Edmundson found that the finer double sorts taken from the green-house, were not sufficiently hardy to stand without protection—partly, no doubt, from their having been rendered more tender than they were naturally, by the constant high temperature of the green-house. He then took *seedling* plants, and planted them, when only a foot high, in the open borders, as we have described. These proved perfectly hardy—and have been exposed once to a temperature of zero, or 32° below the freezing point.

In Carolina, nearly all the double Camellias are hardy enough to be treated as garden shrubs. But the success of Dr. Edmundson proves to our minds, that the Camellia might be acclimated as far north as New-York—not by means of sheltering green-house sorts, but by raising seedlings. His plants produce seeds in abundance, we understand, and no doubt seedlings raised from them would give us plants perfectly naturalised to many parts of the northern states.

California Seeds.—Every botanical reader is aware of the riches of the Flora of our new territory on the Pacific, and a project was started a year ago, to form a subscription to send out a collector to procure rare plants and seeds in California and Oregon,—which, however, was never carried out. We notice, however, that Messrs. Thorburn & Co., offer for sale (at their warehouse, 15 John-street, N. Y.) a collection of seeds of 47 different species of the most attractive and showy trees, shrubs, and flowering plants of California, carefully labeled, and put up in tin boxes. These seeds, we are informed, have just been received from California, where a collector of experience has devoted a season to the exploration of the country, and their collection and preservation. Among them we notice the "Nut Pine," (*Pinus monophyllus*,) a new evergreen oak, several species of Spiræ, Philadelphus, &c., not hitherto known or described. Amateurs will do well to make a sowing, in the hope of adding something new to their grounds.

Curculio.—Your correspondent Wm. Hopkins, exhibits much judgment in his remarks on the curculio. What good will your plum and poultry yards produce, unless all your plum growers in the neighborhood, pursue the same course, as you all agree the insect knows how to use its wings? What good can result from lime, salt or tobacco, when the young insect glories in possessing them? All I can say, is, that in 20 years, I have not lost a crop from the curculio, from more than 30 trees, in a *brick pavement*, round my house. From trees in the garden, I have had a crop for two years only. I see it stated, east, that where a part of the branches extended over a stream of water, no plums were touched by the curculio, but where over the ground, all were destroyed. The reason I assign is this. The *instinct* of the insect, teaches it not to deposit its egg over a pavement, as the young, when it falls to the ground, cannot get thro' the pavement, to obtain winter quarters. The insect is timid, and not fond of congregating where persons are constantly passing, or hogs or poultry constantly under the trees. It is true, the hogs and poultry may destroy all the eggs in your plums, but you can generally depend on the liberality of your neighbors, to give you an abundant supply when your fruit is growing. Yours truly, N. Longworth. *Cincinnati, O.*

The Nectarine a Smooth Peach—A. J. Downing, Esq.—Dear sir: Having read much in the Horticulturist, *pro et con*, concerning a peach stone producing a nectarine and vice versa, I thought a circumstance that transpired under my own observation the past season, might not prove uninteresting to the readers of the Horticulturist.

Some five or six years since, I planted a few thousand peach stones to raise stocks from; but in budding them, quite a number failed to take the bud, and were consequently headed down the next spring, with the exception of the first in each row, which were left as markers; one of which produced the past season, a crop of peaches and *nectarines*. The peaches were of smallish size, good flavor, and ripened a few days later than the Early York.

The nectarines were of small size, well colored, and of fine flavor. Being unwilling to trust to the evidence of my own senses in this matter, I preserved a specimen of the nectarines till the fall show of our (Niagara county) Horticultural Society, when I presented it to some of our best judges of fruit, who unhesitatingly pronounced it a *bona fide* nectarine. This tree never has been grafted or budded. I did not find them, the fruit, on the ground, but picked them off the tree myself. These are facts, and (to me at least,) conclusive and self-convincing, which cannot be controverted.

If you think the above worthy of insertion in the Horticulturist, it is at your disposal.

I have taken the Horticulturist ever since its commencement; it is my hand-book on all subjects of which it treats. I remain yours most sincerely, Jas. Culver. *Royalton, March* 10.

Foreign Vines in North Carolina.—A. J. Downing, Esq.—Sir: I am much obliged to you for all you are pleased to say on the cultivation of the *vine* in general, and especially with respect to the universal failure, in this country, in cultivating the European varieties in the open air; though I have been acquainted with those same prevailing opinions for a great many years. I can add to the authorities cited by you, that of the late President Thomas Jefferson, who stated to me so far back as 1819, his utter failure, and his inability to succeed in cultivating the European varieties at Monticello. Professor Caldwell, at Chapel Hill, N. C., has also failed. Many more could be added, such as Michaux's (the botanist,) experiment in South Carolina, which equally proved a failure. Herbemont in South, and Laspeyre in North Carolina, met only partial success, so far as I can learn. Still, so far back as 1821 and 1822, I succeeded in cultivating them in Fauquier county, Virginia, on the farm of Dr. R. Peyton. I understand that Judge John Scott has had since, great success in the same county.

Wherever I have been, I have found that the *idea* you entertain, about European varieties not succeeding in "*this country*," in the open air, is every where prevailing. "The thing is impossible," you say; certainly in the state of New-York. Though Mr. N. Longworth did not succeed, as he did me the honor to inform me at Cinc'nnati, still that is no reason for my trial not succeeding 6° of latitude farther south.

I may here state that the fig tree and almond tree, do well with us in the open air, and that my Muscat, de Frontignan and White Chasse-

las, ripened in the *open field*, by the 10th of last August, i. e., in 145 days, and that they were as good as any I have ever eaten in Corsica, celebrated for its climate for the culture of the vine. It must be remarked that this early degree of perfect maturity, was produced by vines that eight months previously were not as yet planted in the sand hills of North Carolina, but were on the ocean, on their way to this, their *now* adopted country.

In a letter written more than 17 months ago, to Mr. Thomas Ewbank, at his own request, which will soon be published in the Patent Office Report, you will see, sir, that I do not differ with you as to the importance of the method of seedlings, in order to obtain new varieties best suited to this country. It may be gratifying to you to know that your hint of resorting to seedlings has long been anticipated by me.

As to the grape-vines being exhausted by long cultivation or neglect, the experience of France Vigninicole abundantly proves it. Let us see, for instance, what Le Comte de Gasparin says. "We must provide for this state of things, (old age,) which threatens its future fecundity. There exists two systems. The first is to root up the vine, which tends to its decripitude," &c; and again: "In about 15 years, more or less, the vintage of the vineyard diminishes, and from this epoch, the weakness which at first was but little perceptible, continues, and ends by becoming considerable. A vineyard which at first produced 18 hectoliters, with the same care and manures will only yield 9 or 10 when the vineyard will be 30 or 40 years old." Vol. iv, p. 674.

I cannot anticipate, and will not now state what are my future expectations. I have planted European grape-vines in the open air, in the hope to succeed, though you say it is in vain. "Time alone can determine," I say. I shall take great pleasure in informing you of the results of my trial.

Your recommendation with respect to the cultivation of the European vines in northern latitudes, is perfectly right, but does not hold good for my locality, in latitude 34°. The isothermal line fortunately places me nearly on the same footing with the south of France. That Mr. Loubat and Mr. N. Longworth, should not have succeeded in the field culture of European varieties, is perfectly natural, and nothing else could be expected, unless they had tried the Rhenish kinds. On the contrary, the fig and almond trees do well with us. This is, sir, a pretty good index of climate, and it being congenial to them and the cactus, I hold, by parity of reasoning, that the most delicate vines will continue to flourish with us. I am led to suppose, also, that in the same degree as the quince stock, for instance, modifies its graft, so will our luxurious, hardy native vines, affect the European varieties.. *Nous verrons.*

I wish that such a work as the *Ampelographie*, by Comte Odart, should be more generally known in this country. Comte de Gasparin, in speaking of this work, in his "*Cours d'Agriculture*," says: "We have adopted the nomenclature of Comte Odart, whose Ampelographie is the first work which presents, in a manner somewhat general, the character and synonyms of the grape-vines. This work is the fruit of long years of research and experience."

Such are the men I love to imitate, and quote for my authority. With great consideration, Joseph Togno, M. D. *Diccoteaux, near Wilmington, N. C., January*, 1851.

P. S. Comte Odart, in his classification of American grape-vines, mentions only three, namely: the Skou-per-nong, (the Indian name, meaning *Sweet-water*,) the Catawba and Isabella, (Laspeyre)—all three, be it said, *en passant*, native of North Carolina. This is, at least, a *slight* proof that this is the region of the grape par excellence.

Tan-bark for Mulching.—Having been a constant reader for the last four years, of the best publication on horticulture in the U. S., the Horticulturist and Journal of Rural Art and Rural Taste, and having received more knowledge and real pleasure in the perusal than in reading any other work, I take the liberty to ask a few questions. Last fall I set $250 worth of pear trees. I am satisfied that mulching is one of the greatest securities for the life of new set trees. Will you tell me if there is danger in mulching with refuse tan-bark from the tan-yard? If not, how thick ought it to be round the tree? I have read your articles recommending tan-bark for grapes, but I have not applied it to *young trees* without your advice.

Last fall soon after the fruit dropped, I removed three pear trees from ten inches to eighteen inches in diameter; it took sixteen cattle to move the large one. My neighbors said it could not be done, and now they are moved they say they will not live. I have already proved them *half wrong*, and this summer I intend proving the *other half*. If they live I will tell you; if they die, I shall keep perfectly quiet about it, and when I want to move big trees again, wait till winter and freeze a ball of earth round the roots. I much regret the silence of some of your old correspondents. Has some GIL BLAS told JEFFRIES he begins to flag, or what is the matter? I intend writing a series of articles against the selfishness of mankind in general and JEFFERIES in particular, if we dont hear from him in the next number. Respectfully yours, A. A. F. *Granite Lodge, Brookline, Mass., March* 17, 1851.

[Old tan-bark—that has been exposed for a year to the weather is a good *mulcher*, and will do your trees no harm. Bark fresh from the tan-vats *may*. We hope JEFFRIES will feel himself called out again by the force of public opinion. ED.]

EDUCATION OF GARDENERS.—Your judicious remarks respecting experimental gardens in the April number of last year, are so good that you deserve the thanks of every gardener in the United States, who wishes to see his profession advance from the miserable position in which it now generally stands. If as has been before said, "Man begins to build stately sooner than garden finely," as if gardening were the greater perfection, surely America with all its grandeur must be behind in the march in this respect. I do not deny that there are many places which will rank with some of the best kept up gardens on the other side the Atlantic, but generally speaking this is not the case. Yet there is sufficient taste and desire on the part of those who can afford to support such establishments. We find most of our wealthy citizens keeping a country house and retiring from the crowded cities when Flora puts on her gay attire. We see them wishing to have gardens, and those few who really get them enjoying their beauties. A further proof is in the universal love of flowers and the high prices that are frequently paid for them. Many expend thousands of dollars in laying out their grounds, but which I am sorry to say is too often squandered by men in whom they have placed confidence, who have no ability for such things, who pitch, here and there, a stick of a tree in a hole not large enough to bury a cat, as accidentally as if they had fallen from the clouds, and think they have done wonders, and who instead of producing beauty and grace, and thus giving satisfaction, are at last cut short by the disgust of their employers. If there is desire for such things, it cannot be denied that the universal wish to excel, will prompt American gentlemen to have as good gardens as most Europeans, providing they can get enough of the same class of gardeners as are there found in the best conducted places. Mr. QUIN's comparison (in the July number) between a store-sweeper's wages and those of a gardener, are ill-timed and out of place. Indeed it seems to me his whole argument will hardly bear the test of examination. It is hoped that the eruption may be quenched by a little common sense.

The profession is held back by the horde of *pretenders* who swarm all over the country, who have no ability but in their impudence, who can do every thing perfect in the porter house, and everything imperfectly in the garden, and who from their numbers, their presumption and their arrogance, make the gardener's calling a derision and a mockery. How are gardeners to expect, (except in a few instances) better remuneration than "hewers of wood and drawers of water," while the present state of things exists. It is the bounden duty of every true gardener to set a decided stand against such men, and to hold out the right hand of fellowship to any one who has public influence, and respond with the kindest feelings to him who in his public capacity, endeavors to raise gardening from its present forlorn condition, up to that position which it is entitled to hold. Such societies for the practical education of gardeners as you advocate, would do much towards bringing about so desirable a consummation. They would be the means of testing the abilities of the different men who would come within their sphere, and depend upon it that sphere would be a very extended one if fully carried out, sufficiently so to remodel gardening throughout the country. Only let

the principal large cities have each its horticultural society's garden, and let there be in each a department for general culture. Let it be known to gardeners both here and abroad that they would be employed, and their abilities tested by a scientific and experienced director, whose recommendation could be relied on, and there would be no lack of good and talented men applying for admission. Such societies would be a credit to the country. They would be supported at very little cost; in fact they might be made to be paying concerns, and gardeners abroad—*real gardeners*—not wheelbarrow trundlers—would know that there would be something in the way of an asylum for them to come to, and would be induced thereby to come over in greater numbers, when the host of pretenders would fall back before the face of experience, and fill only the situations of the oppressor and the penurious, and such places would in their turn become a laughing stock to all men of good taste. I have had some experience in the working of such societies in England, and can assert with confidence that they have done more to elevate gardening in that country than anything else. They have been the means during the last twenty years of making English horticulture a model for the world, of stimulating skill and raising a higher standard of perfection. They have also been the means of attracting the attention of spirited observing and intelligent young men, who thereby have been induced to learn the profession, seeing in it something to occupy a talented mind. Plenty of such young men are now languishing in the nursery establishments abroad at low wages, and little prospect before them. These would be easily induced to come over here if they knew there were any chance of bettering their condition, and employing their talent, but in the present position they are ignorant of the true state of gardening here, and those who are here and know how they would be situated on landing do not like to encourage them to come out. Establish such societies as the above; let it be known that there are such institutes where the *educated gardener* can find a resting place without having to succumb to the degrading position (perhaps for years because he has not the pretender's effrontry) of doing all kinds of conveniences for every domectic about a gentleman's back door, and wages in the first instance will be no object, and although employers should have to pay a little more for the services of such men, they will generally and eventually be the gainers to a large extent. Wishing you every success in your advocacy of the true interests of good gardeners, I am yours most respectfully, Wm. Chorlton, Gardener to J. C. Greene, Esq. *Staten Island, March* 4, 1851.

Grapes and Strawberries.—I am gratified to learn that the Diana grape is of good quality south. The fruit in Boston is far inferior to the Catawba with us. I doubt not it will be improved here. I have several vines that will fruit this season.

Your correspondent errs in supposing a cutting from a grape-vine, perfect in male and female organs, can become barren. I would sooner believe in mesmerism than this. I have raised from cuttings, 300,000 bearing plants, and never a non-bearer. A cutting of a defective plant has got there by mistake. You certainly err in saying the Scuppernong of North Carolina is the only native grape that is not perfect in both male and female organs. In our woods, I believe the greater portion of our wild grapes will be found defective in female organs, and barren. I have had the wild seedlings, (the seed I presume dropped by birds,) generally of this character. You certainly err, also, in saying, that in England no attention has been paid to the sexes of the strawberry plant. The strawberries they usually cultivate, are hermaphrodite, and are chiefly used for forcing. In the open ground, with us, their large fruited ones will not average a quarter of a crop of perfect fruit. [Our correspondent has not seen the crops of British Queen grown in England, or he would not hold this opinion. Ed.] Where forced, the pistils are better developed, and bear more fruit. This is the character of their boasted variety, Keen's Seedling. But Mr. Keen himself, discovered that there were varieties wholly defective in the male organ. He says, in one of his letters to the London Horticultural Society, published in their Transactions, that he found one of his beds in forcing, though full of blossoms, bore no fruit. He examined the blossoms, and found no perfect male organs. He went to a bed perfect in sta-

mens, and removed a few plants to the frames, and every blossom was impregnated and bore a perfect fruit. I imported this variety near 30 years since, and still have it, and cultivate it largely. As soon as the character of the strawberry plant is settled east, the Early Scarlet will only be cultivated as an impregnator. I will present Mr. Hogg a silver cup of the value of $100, as soon as he will produce *half a crop* of fruit from Hovey's justly celebrated seedling, or the English Methven Scarlet, if separated from all others. Neither of them will bear a perfect berry.* The same is true of Burr's highly flavored New Pine. Mr. Hovey and Mr. Burr both know the character of their seedlings, and will endorse what I say. It is a mistake to say the Catawba is our only wine grape. I believe the wine from the Missouri and Herbemont, will command a higher price than the dry Catawba wine. I this season paid double price for some of the latter, to one of my tenants. I offered another a higher price, which he declined. The former, with skillful manufacture, will equal Madeira. The latter, the Spanish Manzanilla, which it resembles in aroma and flavor. Yours resp'ly, N. Longworth. *Cincinnati, O., Feb.* 20, 1851.

Rabbits vs. Sulphur.—I have tried the experiment, [from the account in a former number,] the present winter, of placing small pieces of cloth dipped in melted *sulphur*, around a small nursery of fruit trees, at the distance of eight or ten feet from each other, and thus far it has been an impregnable barrier against the ravages of rabbits, which, in winters past, have been very destructive. C. P. *Granville, Ohio, Feb.* 10, 1851.

Horticultural Plough.—Mr. Wilkinson, of the Mt. Airy Agricultural Institute, has lately read an interesting paper before the Philadelphia agricultural association on ploughs and tillage. He exhibited a plan of a horticultural plough, which appears to us worthy of attention, and accompanied it with the following remarks:

To perfect the catalogue of ploughs for the various purposes, we need a plough which might properly be styled the *Horticultural Plough*, for the purpose of ploughing in orchards; one that will enable us to till close to the trees without exposing them to injury from being barked or galled by the whipple-trees of the horse tackling, or the yoke of the oxen; and also to guard against injuring the teams, which often occurs in ploughing among trees, by bruising their hips against them. The same instrument, if properly constructed, will also be found very useful for ploughing along fences, whether the furrow is to be turned to or from the fence.

I have prepared a diagram of a form of plough, which I will submit to your inspection, that will be found an efficient improvement for all the above purposes, for which no manufacturer has ever succeeded in making one in the least adapted. In tilling the land near the thorn, or maclura hedge, this plough will enable us to till as close to them as we desire, without subjecting the teams to that painful laceration by the thorns, which is unavoidable in the use of a common plough in tillage. Any common plough, that is adapted to both fallow and sward land, and one that is considerably worn, will answer the purpose for a horticultural plough, when altered, by attaching to it the shifting beam—from the fact that it will be used but little, compared with other ploughs; hence a plough considerably worn, will answer as well as any.

* We hope Mr. H. will accept this challenge. Ed.

Prairie Roses.—In June last I wrote an article on the prairie roses, 15 in number, which were in my possession, and with a few exceptions, in bloom. This article was published in the Syracuse Daily Journal, about the 4th of July, and copied into the August number of the Horticulturist. Some of the above, as before stated, were not fully expanded at the time, but the descriptions of such were copied from an article in Hovey's Magazine, (by the editor, see August No. 1847,) who then had eight in number in bloom, not including "Mrs. Hovey," but represented Mrs. Hovey as a pure or superb white rose, giving Mr. Joshua Pierce's description of it. After I had penned this article, my Mrs. Hovey bloomed very finely and was a *splendid blush*.

I see, however, that this rose is still advertised by Messrs. Hovey and others as a pure white, (see June No. of Hovey's Magazine, 1850) and I naturally came to the conclusion that I might have recieved the wrong rose, although I purchased it from the originator himself, (Mr. J. Pierce, of Washington.) When in Albany, last September, I asked Mr. James Wilson if he had Mrs. Hovey, (Prairie)—to which he replied affirmatively. Where did you get it? His reply was that a friend had ordered it from Miss Hovey & Co., of Boston, and he had re-received his plant from that friend. I then ob-

served that I thought I had the wrong rose, but that Messrs. Hovey & Co.'s was right, as they still advertised it as a fine white, and I should be pleased to get a few buds of him; particularly so, as his rose was the same as Messrs. Hovey & Co's. Mr. Wilson looked me in the face, and very pointedly asked, "what color is yours?" I replied, a beautiful blush. "So is *mine*, and so is Messrs. Hovey & Co.'s," was his immediate answer.

Now, sir, presuming that I have the Prairie Rose Mrs. Hovey, correct, (as a number have also said it was a blush,) I wish to *correct* the statement I have put forth, and let it be publicly known, that the Prairie Rose, Mrs. Hovey, *is not* a *pure white*, (although a beautiful rose,) and if the Messrs. Hovey & Co. of Boston, or our friends Parsons & Co. of Flushing, or any other persons, have it "*a pure white*," as advertised or described, they will confer a very great favor on many of your readers, and particularly on your humble servant, by making it known, so that we may all possess ourselves of so valuable a rose. Can you, Mr. Editor, enlighten us any on this subject? A. Fahnestock. *Syracuse, Feb.* 15, 1851.

[We have this Prairie Rose called "Mrs. Hovey," received from Boston, and described as a white rose, which has bloomed two seasons, and is a deep blush rose—with no white about it. Ed.]

Horticultural Societies.

Pennsylvania.—The meeting for March was held on the 18th, when there was a fine display, comprising fine collections of flowering plants, from Jas. Ritchie, Jno. Lambert, Robert Buist, A. M. Eastwick, and J. D. Fulton—Cut flowers, Designs, Boquets, &c. Extensive collections of vegetables were shown by several gardeners. A vote of thanks was accorded to Charles Downing, for a copy of the "Architecture of Country Houses, by A. J. Downing."

The stated meeting for April was held on the 15th. The displays of plants and forced vegetables, were very fine, and furnished from six green-houses and a number of hot-beds. A few only of the most interesting plants from each contribution will be noticed. Among those from F. Lennig, were Gardenia Stanleyana, Franciscea hydrangeæ formis, and Columnea Scheldeana, rare, and which attracted much attention. From Peter Mackenzie, were Silene rosea gracea and Crepis Drummondii of recent introduction, Pansies, Roses, and a beautiful display of Camellias; of the latter, a flower of his seedling of this year, named "Jenny Lind," a perfect gem, and was much admired. From Robert Buist, were specimens of a new plant from California in full bloom, allied to Arbutus, Pimelia spectabilis, Pelargonia and Hyacinths. From A. M. Eastwick, Callostylis aurantiacus? new, Azaleas, Cereas and Hyacinths. From Miss Gratz, Campanula nobilis, Azalea indica, rubra and Pelargonia. From James Ritchie, a choice selection of Roses and Pansies. Some beautiful specimens of cut Ranunculus were shown from James McGowan, Mt. Airy.

The only description of fruits shown, were Apples. By James Jackson, Quackertown, a seedling of merit. By Dr. Brinckle, from Chas. Carpenter, Kelly's Island, Lake Erie, "Carpenter's No. 2"—from A. Fahnestock, Syracuse, N. Y., "Northern Spy." By John Perkins, Monmouth and Newtown Pippins and Tewksbury winter blush.

The vegetable department consisted of three collections from Joseph Ripkat, Manayunck; from Miss Gratz, and from the garden of the Insane hospital.

A vote of thanks was accorded to Dr. Jno. M. Sharpless for the gift of a collection of Seeds from Cairo, Egypt. Tho. P. James, *Rec. Secretary.*

New-Jersey.—The N. J. Hort. Society have resolved to hold their next Annual Exhibition at Jersey City, on the 24th, 25th and 26th days of September, and have issued a liberal list of Premiums to be awarded at that time. A semi-annual meeting of the Society is to be held at Trenton, on the 20th of June.

HAMPTON COURT AVENUE.

Hort: June, 1851.